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TRANSACTIONS

OF THE

WORLD'S CONGRESS

OF

HOMŒOPATHIC PHYSICIANS AND SURGEONS

HELD UNDER THE AUSPICES OF THE WORLD'S CONGRESS AUXILIARY
OF THE WORLD'S COLUMBIAN EXPOSITION, IN

CHICAGO, ILL., MAY 29 TO JUNE 3, 1893.

PUBLISHED BY THE AMERICAN INSTITUTE OF HOMŒOPATHY,
AND EDITED BY ITS GENERAL SECRETARY,
PEMBERTON DUDLEY, M.D.

PHILADELPHIA:
SHERMAN & CO., PRINTERS, SEVENTH AND CHERRY STREETS.
1894.

AUTHORIZED DEFINITION.

At the Annual Session of 1881, the American Institute of Homœopathy ordered as follows:

1. That the President's definition of the words "Regular" and "Irregular," as applied to schools and practitioners of medicine, be adopted by this Institute as correct.

2. That hereafter this definition be conspicuously printed in all published documents and TRANSACTIONS of this Institute, in order that the profession, of all schools, may the sooner be familiarized with, and led to adopt it.

"A REGULAR PHYSICIAN.—A graduate of a regularly chartered medical college. The term also applies to a person practicing the healing art in accordance with the laws of the country in which he resides."

See *Transactions* of 1881, pp. 23, 68 and 71.

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HISTORICAL NOTE.

Soon after the organization of the Directory of the World's Columbian Exposition, to be held in Chicago, Ill., U. S. A., in 1893, it was suggested, that in order to make the Exposition complete, and the celebration adequate, the wonderful achievements of the new age, in science, literature, education, government, jurisprudence, morals, charity, religion, and other departments of human activity, should also be conspicuously displayed as the most effective means of increasing the fraternity, progress, prosperity and peace of mankind.

It was therefore proposed that a series of World's Congresses for that purpose be held in connection with the World's Columbian Exposition of 1893, and the World's Congress Auxiliary was duly organized to promote the holding and success of such congresses. This organization was authorized and supported by the Exposition Management, and approved by the United States Government. Ample audience rooms, with special facilities for sectional as well as general meetings, were provided by the Directory of the Fair in a magnificent Art Building erected on the lake front.

Upon the establishment of the World's Congress Auxiliary, as above mentioned, its President, Hon. C. C. Bonney, invited the Homœopathic profession to hold an International Congress in Chicago during the World's Columbian Exposition in 1893. A local Committee was appointed and an Advisory Council selected, composed of prominent representatives of the Homœopathic school in all lands. Acceptances were received from nearly all these physicians, and the plan suggested for carrying out the enterprise was cordially endorsed. At the same time there was appointed a committee for a Congress of Women, but subsequently it was agreed to hold the two congresses together as one body. At the meeting of the American Institute of Homœopathy held at Washington, D. C., in June, 1892, it was unanimously voted to hold its next session in Chicago, and in conjunction with the World's Congress; and instead of transacting its usual business, to devote its energies to the promotion of the scientific work and interests of the Congress.

At the request of the Local Committee, the Institute also appointed a committee of its own to act with the Local Committee in the interests of the Congress. At a joint meeting of the Committees of the Congress and of the Institute and the Advisory Council, held in Washington City, there was appointed a committee consisting of the Chairman and Vice-Chairman of the Congress and the President and Vice-President of the American Institute, to prepare a general plan for the Congress and to invite distinguished representatives of the Homœopathic school to deliver addresses before it.

The committees, after many meetings and consultations, decided upon the plans under which the Congress should be conducted, and the subjects and questions to which its consideration should be devoted. They also secured the aid of those whose addresses, essays and discussions are herein presented. The title by which the convocation was to be known was "The World's Congress of Homœopathic Physicians and Surgeons," and its papers and discussions were to be the property of the World's Congress Auxiliary.

At the meeting of the American Institute of Homœopathy, held in Chicago, Ill., during the continuance of the Congress, it was urged that the publication of the papers of the Congress at an early day was much to be desired, and a question was raised as to the probability of their early publication by the Congress Auxiliary. After a careful consideration of the subject, a motion was offered and adopted providing:

"That the Executive and Publication Committee be empowered to confer with the authorities and officials of the Congress, and to act as circumstances shall permit and their own judgment shall dictate."

Under the authority thus conferred, the Executive Committee of the Institute received the manuscripts of the Congress from its officials, and ordered that they be published and copies distributed to all persons entitled to the Institute *Transactions*, and to all foreign physicians who had contributed to the success of the Congress.

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Mrs. Potter Palmer, President of the Woman's Branch of the World's Congress Auxiliary.	Chicago, Ill.

Honorary Presidents.

Richard Hughes, M.D., President International Congress of 1881,	Brighton, Eng.
I. T. Talbot, M.D., President International Congress of 1891,	Boston, Mass.

President.

J. S. Mitchell, M.D.,	Chicago, Ill.

Vice-Presidents.

R. Ludlam, M.D.,	Chicago, Ill.
Julia Holmes Smith, M.D.,	Chicago, Ill.

Honorary Vice-Presidents.

J. H. McClelland, M.D., President American Institute of Homœopathy,	Pittsburgh, Pa.

Galley Blackley, M.D., President British Homœopathic Society.
E. A. Rushmore, M.D., President International Hahnemannian Society.
And Presidents and Ex-Presidents of all other National Homœopathic Societies.

Secretary.

W. A. Dunn, M.D.,	Chicago, Ill

Honorary Secretary.

Pemberton Dudley, M.D., Secretary American Institute of Homœopathy,	Philadelphia, Pa.

Secretary World's Congress Auxiliary.

Clarence E. Young,	Chicago. Ill.

Recording Secretary.

T. M. Strong, M.D.,	Boston, Mass.

Chairman Committee of Registration and Statistics.

T. Franklin Smith, M.D.,	New York, N. Y.

Chairman Committee on Foreign Correspondence.

Wesley A. Dunn, M.D.,	Chicago, Ill.

SECTIONS.

Surgery.

Wm. B. Van Lennep, M.D., Chairman,	Philadelphia, Pa.

Gynæcology.

O. S. Runnels, M.D., Chairman,	Indianapolis, Ind.

Ophthalmology and Otology.

A. B. Norton, M.D., Chairman,	New York, N.Y.

Materia Medica.

A. C. Cowperthwaite, M.D.. Chairman,	Chicago, Ill.

Obstetrics.

T. Griswold Comstock, M.D., Chairman,	St. Louis, Mo.

Clinical Medicine.

Charles Gatchell, M.D., Chairman,	Ann Arbor, Mich.

Mental and Nervous Diseases.

Selden H. Talcott, M.D., Chairman,	Middletown, N. Y.

Rhinology and Laryngology.

Horace F. Ivins, M.D., Chairman,	Philadelphia, Pa.

Pædology.

Emily V. Pardee, Chairman,	South Norwalk, Conn.

Committee on Business.

T. Y. Kinne, M.D., Chairman,	Paterson, N. J.
I. T. Talbot, M.D.,	Boston, Mass.
C. G. Higbee, M.D.,	St. Paul, Minn.
D. H. Beckwith, M.D.,	Cleveland, O.

Committee on Resolutions.

J. P. Dake, M.D., Chairman,	Nashville, Tenn.
Bushrod W. James, M.D.,	Philadelphia, Pa.
O. S. Runnels, M.D.,	Indianapolis, Ind.
R. Ludlam, M.D.,	Chicago, Ill.
J. A. Albertson, M.D.,	San Francisco, Cal.

RULES OF ORDER.

1. All Homœopathic physicians attending the Congress shall have equal rights as members.

2. The President shall appoint and announce at the first session of the convention, committees on business and on resolutions, of five members each.

3. The Committee on Business shall consider and report such measures as it may deem necessary for promoting and expediting the work of the Congress.

4. The Committee on Resolutions shall consider the subject-matter of resolutions and all other business that may be submitted to it, and shall report thereon at such times as the Congress may direct.

5. Addresses, except that of the President, shall not occupy more than thirty minutes in their delivery, and papers in each section not more than twenty minutes, except by general consent of the convention.

6. Members, announced by the President to lead in discussions, shall not occupy more than ten minutes. Other members participating in the discussion shall not consume more than five minutes. No member shall speak more than once upon any subject under discussion. The author of the paper shall have the privilege of closing the discussion thereon. Debate on any single subject shall be limited to one hour.

7. Presentation of reports on the condition and progress of Homœopathy in foreign States and countries shall be limited to twenty minutes each.

8. Resolutions and motions having the effect of resolutions shall be read and referred to the Committee on Resolutions for acceptance. They shall be open for discussion when reported back by the committee.

9. Reports and recommendations from the Committee on Business shall be first in order at the opening of each morning session.

PROCEEDINGS OF THE CONGRESS.

CHICAGO, ILL., May 29, 1893.

THE World's Congress of Homœopathic Physicians and Surgeons assembled in the "Hall of Washington," in the Art Institute at eight o'clock P.M.

The officers of the World's Congress Auxiliary, and of the Congress of Homœopathy, and also the officers of the American Institute of Homœopathy, occupied seats upon the platform, together with several delegates to the Congress from foreign countries. The large auditorium was well filled by physicians and their friends.

The meeting was called to order by Hon. C. C. Bonney, President of the World's Congress Auxiliary, and at his request, Rev. T. G. Milsted, chaplain of the organization, led the audience, in prayer, which was followed by

PRESIDENT BONNEY'S OPENING ADDRESS.

It is what Mr. Milsted's predecessor, the beloved Robert Collyer, would call the simple truth, that the present occasion is the most interesting and in some respects the most noteworthy event of the history of Homœopathic medicine and surgery. In every part of the world in which this body of the medical profession exists, the hearts of its members are turned towards this Art Palace to-night, with earnest wishes for the most brilliant and satisfactory success.

Many are here to participate in these ceremonies, but for every one who honors them by his presence there are many hundreds who wish they were here, and who, though absent in body are yet with us in their hearts.

Homœopathy represents in the medical world that which may be designated—borrowing and slightly paraphrasing a phrase from the new movement in literature in our kindred republic of France—as the spiritualization of thought in the world of medicine.

Entering the medical world at a time when it was in many

marked respects different from what it is to-day, Homœopathy seemed, to the casual observer, to be working the most miraculous cures with NOTHING! It was so startling in its claims and the results were so marked when tested by the logic of statistics, that the advent of Homœopathy into the world of medicine presently stimulated a new and zealous inquiry on the part of thoughtful medical minds into the mysteries and principles of the science and the art of medicine.

This Homœopathic movement emphasized, as nothing else had ever done before, and as nothing has done since, the marvellous medical power of nature. It immediately set the medical world to thinking that if agencies so delicate and subtle that they could neither be weighed nor measured; neither felt nor heard, could do so much, there must be something deeper in the science of medicine than they had heretofore discovered; and to-day it is not my voice nor the voice of Homœopathic physicians only, but also the voices of distinguished members of the general profession of medicine and surgery—as the presiding officer of this Congress heard in my presence the other day—which declare that of all the blessings which the general profession of medicine and surgery has received, those derived from Homœopathy are easily first and most useful.

This is said, not in a spirit of rivalry, much less in a spirit of censure, but it is in the spirit of utmost cordiality, and brotherhood. For I can testify on this occasion, that of the persons instrumental in promoting the organization of this Congress, some were members, not of the Homœopathic, but of the general profession of medicine and surgery.

The immense influence exerted by the Homœopathic School of medicine and surgery on the general profession, did not end its influence there. It exerted at the same time a tremendous influence on the mind of patients, and on public opinion generally. It awakened curiosity; it stimulated investigation; it excited research, and the result has been of the greatest benefit to physicians and surgeons the whole world over, without distinction of school. This agitation has produced an intelligent class of patients. No physician can deal most successfully with disease, without the co-operation of an intelligent patient. Ignorance stands the greatest barrier in the way of the success of the intelligent physician and surgeon. To overcome that ignorance; to substitute for it a general appreciation of the

nature of the work to be done, a willingness in the heart of the patient to co-operate with his physician, is, as every wise physician and surgeon knows, of immense importance to the desired cure.

We do not seek, the medical profession does not desire, that every one should become his own doctor any more than that every one should become his own blacksmith, his own tailor, his own dry-goods merchant, his own railway carrier. But only that patients shall be possessed of that degree of intelligence which will enable them to co-operate understandingly with the efforts made in their behalf.

The results of the influences to which I have referred in other fields have been to promote what did not exist fifty years ago at all in any school of a popular nature, the study of the general principles of anatomy, physiology, and hygiene, which has now become common all over the land. To know something of the laws of life and health ; to have some intelligent understanding of the structure of that most wonderful of all creations, the human body; to have some knowledge of the rules which must be obeyed if health would be preserved; to know something of the conditions under which great toil can be endured and the system yet not break down ; these are things which every intelligent physician and surgeon to-day desires to have known by the whole body of the people.

The organization of the World's Congresses of 1893 has been effected by local Committees of Organization, one of men, and a corresponding one of women. Recognizing the fitness of the advent of women into so many new fields of usefulness and honor, the World's Congress Auxiliary in cases proper for the participation of women has appointed a committee to co-operate in the organization of the Congress with the corresponding committee of men. The two local committees which had the organization of this Congress in charge are represented respectively by Dr. J. S. Mitchell on the one hand and Dr. Julia Holmes Smith on the other. These local Committees of Organization however, could not undertake to organize a World's Congress on Medicine and Surgery without the co-operation of representative minds selected from all countries where the profession has been established. For this reason an Advisory Council consisting perhaps of a hundred or more of physicians and surgeons, located in different States and countries, was selected to constitute the non-resident branch of these committees of organization.

Medical organizations of the different States and countries were invited to appoint Committees of Co-operation, and act with these committees and Advisory Councils in perfecting the work.

Nothing remains for me but to extend to you, as I now do, on behalf of the World's Congress Auxiliary, and on behalf of the authorities, municipal, State and National which have co-operated to this end, a most hearty and cordial welcome to the World's Congresses of 1893, especially to the World's Congress on Homœopathic Medicine and Surgery. It is also fitting that the representative of the Woman's Branch of the World's Congress Auxiliary should extend, in behalf of the women whom she represents, the women of all States and countries represented here, her own welcome on this occasion. I therefore have the honor of introducing to you Mrs. Charles Henrotin, who will now address you on behalf of the Woman's Branch of the World's Congress Auxiliary.

Mrs. Charles Henrotin's Address.

Mr. Chairman, Ladies and Gentlemen: Dr. Julia Holmes Smith and her committee have kindly given me this opportunity to extend the welcome of the Woman's Branch to the gentlemen and ladies participating in this Congress, and I have been asked by them also to speak a few words on medical women, from the standpoint of an outsider. I shall carefully refrain from doing that; but I may, if you will bear with me, try to voice what appears to me to be the salient points of the participation of women in this Congress.

This is the first time in the medical profession in which women have obtained an equal recognition in the deliberations of any congress. Being represented as they are by the Woman's Committee of the Woman's Branch of the World's Congress Auxiliary, which association is recognized by government, they are therefore taking part in the deliberations of a governmental congress. The congress of representative women which preceded this was a pæan of praise as to what women had accomplished since the discovery of America, and also voicing their hopes for the future. But the truth of the matter is that women will be judged by the part which they will take in the series which is now inaugurated, because this series of congresses, commencing with the medical congresses, deals with specialized lines of light, as educational, industrial, professional, and it is along that line of specialization that modern life is tending. By their perception

and deliberations in these congresses, they will show on which points they are weak and on which they are strong; and they will thus emphasize not only woman's attainments but also what she has done along the line of specialized effort; and in this modern civilization, if women hope to compete at all, it is very necessary that they realize their position in this way.

There must be some cause for the few women's names which appear on this programme. I leave it for the women participating in the Congress to say what. Is it because they so largely devote their professional efforts to practice among women and children, or do they, when they graduate, give up their studies, contenting themselves with a fair practice and without making their profession the love of their lives as well as the means of earning their daily livelihood?

This generous recognition of women in the profession, as shown by these congresses, should be the greatest incentive to them to prove themselves to be worthy of it, and to demonstrate their fitness to take an equal position with their brother physicians. It may be, however, that the future of the professions will prove that the love of the exact sciences is not ours, but that we will take up rather the general practice underlying the home, the perfection of medical appliances, the trained nurses, thus bringing into the profession the practical details on which depend after all half the success of the physician.

With all modesty, I leave these suggestions to the women taking part in the deliberations of the Congress, and I reiterate my welcome to you, ladies and gentlemen.

Mr. Bonney: With a patience, skill, energy and devotion to duty worthy of the highest praise, Dr. J. S. Mitchell, Chairman of the General Committee of Organization of this Congress, has pursued the labor of organizing it during the past three years. I have now the pleasure and honor to present to you, as the presiding officer of this Congress, Dr. J. S. Mitchell, of Chicago.

Dr. Mitchell, on taking the chair, was greeted with hearty applause. He said:

Ladies and Gentlemen: I take pleasure in introducing, as the next speaker, Dr. James H. McClelland, of Pittsburgh, Pennsylvania, President of the American Institute of Homœopathy, the oldest national medical association in the United States.

Address of Dr. J. H. McClelland.

Mr. Chairman, Ladies and Gentlemen, Members of the Congress: It affords me very great pleasure indeed to represent the American Institute of Homœopathy on this occasion, and to add my words of welcome to those who have preceded me. You will all agree that our grateful acknowledgments are due to President Bonney and to President Palmer and her able coadjutor, Mrs. Henrotin, God bless them, that we have an opportunity, in these series of scientific congresses that have been inaugurated as a conspicuous feature of the sublime demonstration that will go into history as the Columbian Exposition. That there has been a most liberal expenditure of time and labor and money to complete the arrangements for this Congress, we well know, and the committees represented by Dr. J. S. Mitchell and Mrs. Julia Holmes Smith—God bless her too—merit our unqualified thanks. The work has been well and truly done.

This Congress, unlike previous ones of our school, has been convened under the auspices and fostering care of the World's Congress Auxiliary; yet the American Institute of Homœopathy maintains a cordial interest in its welfare, as the parent organization. This interest is further manifested by its adjourning over its scientific work until next year, that all efforts might be concentrated upon the work of the Congress. Under the auspices of our national body, which, many of you know, is the oldest medical association in this country, now entering its fiftieth year, there was held the memorable Congress of 1876, under the leadership of the immortal Dunham. Three others have been held since, the last under the leadership of that leader of men, Dr. I. Tisdale Talbot, which achieved even greater success than the gathering of 1876.

We now inaugurate the Columbian Congress of 1893, and are gathered this evening under auspices most fair and auspicious, under an official patronage and fostering care of which we feel justly proud. We take our place in a line of scientific congresses unequalled in the world's history, and from which will flow results far reaching and of great good to mankind.

This Congress, let me suggest, stands for more than a report upon the medical sciences in general, great and important as they are. It stands for a reformation in the science of therapeutics more far reaching and important than any of ancient or modern times. While

this great Exposition represents the advance in every branch of human knowledge since Columbus touched our shores, four hundred years ago, this Congress will, in some measure, show forth the advance in medicine since Hahnemann, our veritable Columbus, made his discoveries a single century ago. And I am not overstating when I say the changes are equally great. The world, indeed, owes more than it can ever repay to that great and good man whose mighty genius brought about this great reformation.

I noticed in that imperial dome, which this wonderful people have erected in that white city by the lake, inscribed the names of such medical heroes as Hippocrates and Galen and Harvey and Hunter and so on, but the name most worthy to occupy a conspicuous place in that line of worthies was that of Samuel Hahnemann; and, my friends, the time is ripe when suitable memorials should be erected to his memory. Not only in the interest of the governing principles alluded to, however, are we assembled here this evening, but for the advancement of each and every branch of our beloved art; and we commit this great task to the Congress now assembled with great confidence. It is, therefore, with the greatest good-will that the American Institute on this occasion gives place to the World's Congress, and joins in the voice of welcome which flows in such generous measure here to-night.

THE CHAIRMAN: It is well known that these congresses have been conducted by the united and harmonious labor of men and women. I now introduce Dr. Julia Holmes Smith, who has worked so effectually as the Chairman of the Woman's Congress.

ADDRESS OF DR. JULIA HOLMES SMITH.

Mr. Chairman, Members of the American Institute and Men and Women Who are Interested in What is Going on Here: I come to greet you, and I come to thank you for your presence, because that presence means your interest, and I come to bespeak in your behalf a charity. A charity for what? For the minority. My chief, Mrs. Henrotin, has said to-night she was surprised to see so few names of women on the programme. Will you tell me why? Mrs. Henrotin is not a doctor. She does not know, she has never thought of the dark days and the anxious nights, and the hard work and the earnest toil and the great discouragement and the intense opposition that we have had from our associates, from the men who take

care of us, from the men who love us, from the men who thought we were most charming, and from the men who did not wish us to do anything else but to be sweet. Now that is a fact, and that is the only trouble that there are so few names on the programme. We had rather stay at home—the majority of us. We had rather be taken care of—the majority of us. We had rather do nothing at all but be what most of the men who love us wish us to be. It means a great deal when a girl says, I will be a scientist, I will be a doctor, I will be a chemist, I will be as Dr. Talbot's daughter has said she would be—a professor of coal economics. It means putting aside a lot of nice things—oh, so many nice things! It means the sacrifice of so much—so much that we women love, and it means a regular travelling on to a Gethsemane, and it does not unfrequently happen that that Gethsemane ends in Calvary, because a woman's ambition killed is a woman crucified.

Now, you can feel that yourselves, and you know that yourselves, you men and women who listen to me to-night. That is why, Mrs. Henrotin, there are few names on the programme to-night. It means much to us. This century, this woman's century, this century in which woman has had her apotheosis, and the apotheosis has been right here, in the city by the lake, in this new and unknown city, in the city which fifty years ago was almost a wilderness,—in this city women have had—what? The recognition we have here to-night from my peers. They have not had it before, and that is the reason why we have so few women's names on the programme. We are rejoicing; and we are indebted to America, we are indebted to this Congress, we are indebted to this nation, we are indebted to the representatives of this nation, as we have them here in Mr. Bonney and Mr. Henrotin, that we women have an opportunity to say what we think here, to be what we please here, and to tell you what I am telling you now, the reason why there are so few women's names on the programme. It is not for lack of ambition or study, but for lack of opportunity heretofore, and which now is open to us.

This is our opportunity. This is what we have been waiting for, and when we have the leadership of a woman like this, a woman who is ready to say go, and to hold up the hands and the heels of the woman who is going, because some of the most beautiful pictures in the World's Exposition are of women who are flying along, their arms outstretched and their feet in the air, because of her ambition,

earnestly, eagerly, patiently, painstakingly, going on and on; and only God knows where she will succeed, if you will only not put weights on her heels.

There *are* few names on the programme; but it is the fault of the past. If it ever happens—and please God, Mrs. Henrotin, in your time and mine it will—that we have another World's Congress in Chicago, or anywhere under heaven, there will be many a name, so many that the woman's congress—which we had just a little while ago, and whose badge I wear now, the confederated congress of women—will be a petty thing compared to what we shall have then, in our time and in your time.

Now, I wonder if there are doctors down here, women doctors, and I wonder if they know just exactly what I mean by these words? I wonder if they feel as I feel, that it is a lack of opportunity? We mothers—Mrs. Henrotin has said it is the domestic practice in which we excel—we mothers sit by the fire and spin. We conserve the money that our husbands bring in, and we do not say, this is for Jane, and this for Harriet. What do we say? John must go to college, and Harry must go into the navy; and so we save and we toil. Why? Because of this intense domestic instinct. I would not give it up; not for one moment would I give it up; but it has been a disadvantage to all of us; and sometimes it is a question in my mind whether any mother has a right to be anything but a mother; and whether any wife has any right to be anything but a wife. I would consecrate the professions to women who are in love with the professions. I would consecrate ambition to women who are in love with ambition. I would have women married to the thing. I would educate my children to the thing, if those children had any sort of sentiment for it. It must be a love, it must be an enthusiasm, it must be a consecration; it may be a martyrdom, for we have no right to say to any man, take this part of a woman to be your wife. I am very doubtful, indeed, whether a woman can succeed as a physician, as a surgeon, as a chemist, if she rocks the cradle with her foot while she studies her anatomy. When you go into a medical school you must write yourself a doctor. I was an old woman when I began, so I did not have the temptation.

Another point, and it is a very serious point, and a very important thing, that I have come to say to-night, because this may be the

last time that I will ever talk at a world's congress, and I want to have my opportunity: Have women failed? Have they really failed? Have they never been surgeons? Have they never been alienists? Have they never been chemists? Have they never been biologists? Is there no woman anywhere of whom we can say, she is a great woman in this line? I know a woman, of whom I spoke the other night in the Women's Congress, who is now in an important position in the Chicago University; Emily Nunn Whitman. She is authority in biology, and all the scientific journals in America and Europe accept her contributions. She is typical. There are many others. I heard the other day of a young woman, a very young woman, who has not very many years seen the ink green on her diploma, who has been successful in ovariotomy and laparotomy. I know a woman, not very far from me, who does very good work in surgery, and we have name after name that we accept as authority. We teach our students the names of women who have discovered important matters and important methods in various branches of medicine and practice. We have not failed. We have done our best according to the opportunity that was given us, and we thank and bless and pray for all sorts of good things to come to the men who have given us that opportunity.

THE CHAIRMAN: I have the honor of introducing a distinguished representative of our school from abroad, Dr. A. E. Hawkes, of Liverpool, England, President-elect of the British Homœopathic Congress.

ADDRESS OF DR. ALFRED E. HAWKES.

Mr. Chairman, Ladies and Gentlemen: I am exceedingly obliged to you for your kind reception of me as representing some of the Homœopaths of my own country. I am exceedingly glad also to have had the opportunity of coming to see this great gathering of those interested in Homœopathy. I come from the city of Liverpool where fifty years ago the revered Dr. J. J. Drysdale, single-handed, fought the battle for the truth. One after another joined him until he became so strong in that city that some few years ago one of our greatest merchants, Henry Tait, offered to give us some twenty-five thousand pounds to build a hospital if the society of which I happened to be President, the Homœopathic Medical Society of Liverpool, would carry on the work. That hospital was

built and is now in good working order, and we undertake any kind of work that turns up.

I thank you for your kindness and I have only to say that Homœopathy is flourishing in Great Britain, or in the part of it with which I am familiar, and the question of medical women and their profession is being not very slowly settled. The Scotch examining board admit them, and they sometimes have to confess that the women get more marks than the men. At Cambridge, as you know, Miss Fawcett obtained sufficient marks to head the head wrangler. Women are being examined in London by perhaps the stiffest examining board in the whole world, possibly with the exception, as I am informed, of Vienna, and women there are gaining the highest honors that the University can give, and obtaining their degrees in medicine. I for one, wish the women Godspeed and I am quite sure that given fair play they will give a good account of themselves. My only further hope is that those women who graduate in medicine will turn their attention to Homœopathy, which in so very many ways they are specially adapted to carry out.

The Chairman then introduced Dr. J. Cavendish Molson, physician of the London Homœopathic Hospital, who addressed the meeting as follows:

Address of Dr. J. Cavendish Molson.

Ladies and Gentlemen: One of our great men on the other side of the water said years ago, "some men are born to greatness, other men achieve greatness while others have greatness thrust upon them." I come in under the third class. The President of the British Homœopathic Society wrote to me only a few days ago asking me if I would act as representative of that society at the World's Congress of Homœopaths.

Where shall I begin and what shall I say? I arrived in New York the other day. I simply rushed through the city, and went on hurriedly by the great Pennsylvania Railroad. Everthing was new to me; the four line track, the stupendous engines, the marvellous railway cars, with all their well furnished appointments. These things arrested my attention. I went on and paused and took full breath at Washington. What did I see there? Such a city as I have seen nowhere else. I have been north and south and east and finally I have come west, and the west eclipses all.

Last year it was my pleasure to go to the summit of a continent, the North Cape, and there we were photographed by the light of the midnight sun. On arriving in America what has struck me most of all, next to the marvellous inventive genius displayed on every hand, is the cordial reception accorded to me. I have felt quite at home. In Washington one of the government officials placed himself at our disposal and acted as our guide to your wonderful Arlington, and there spread out before us in panoramic beauty, lay your glorious capitol, with its beautiful obelisk in full view.

When I arrived in this city the same welcome, the same kindness was extended to me as there, but I think I must say that I would rather live in Washington than in Chicago. I have been to the top of your Masonic Temple. It was a marvellous sight, but every man that could show a brick funnel seemed to vie with his neighbor to make the greatest smoke. If you ever have any clear days here, which way does the wind blow on those days? I have no doubt I will get an answer to all these questions a little later.

Then your fair White City came in view, with all its glorious assemblage of domes and minarets. But, ladies and gentlemen, nothing has impressed me so much as this assemblage. We are here to-night to honor the genius of Samuel Hahnemann. I say his genius. When one goes out yonder they see there marvels of the inventive faculty of man, but do not think of Hahnemann as an inventive genius so much as a discoverer; and it seems to me that the discoveries of scientific men vie with the inventive faculty in man. Of all the discoveries potent for good, of all our philanthropic institutions is there one; yea I think I may throw down the gauntlet and challenge every man and woman here to mention one discovery which can be put on a par with the marvellous discovery of Samuel Hahnemann.

One word in conclusion. On my return, of all that I shall have seen and heard, that which I shall wish most to convey to my colleagues will be the kind and cordial reception which has been accorded to me all along the line. I have yet much to see before I return.

The Chairman then introduced to the meeting Dr. C. Bojanus, of Samara, Russia, who addressed the Congress in his native language, a translation of which is here presented.

Address of Dr. Carl Bojanus.

My honored brethren will permit me to call, in a few words, their attention to the following subject, which may prove useful to the welfare of humanity. Whilst working at my answers to the questions which had been sent to me by the Committee of the World's Congress Auxiliary on Medico-Climatology, I involuntarily remembered what I had written myself about meteorological stations in my work, *Homœopathic Therapeutics Applied to Operative Surgery*, published in Stuttgardt in 1880. The question to be answered in the programme of the Climatological Bureau was as follows: "What more can the weather bureaus do to aid climatologists and disseminate climatological knowledge?" My answer has been given in the article sent to Dr. Duncan. What was it, then, which put me in mind of what I had written fourteen years ago about a work of the late Dr. F. X. Horn, of Munich, entitled *About the Production of Diseases Through Magnetic, Electric, and Atmospheric Influences*, a work which had been read by me with great interest in 1863? A most superficial look into the book will show at once its worth and its importance. I happened to hear that this was not the only work of Dr. Horn upon the subject. I tried to get the rest of his writings, but was informed that these works were all out of sale. I succeeded in getting, at an antiquarian's store, the first mentioned work of Dr. Horn, and I had the pleasure of giving it to Dr. Duncan. During my last stay in Wiesbaden, this spring, I became acquainted with Dr. Erwein, of Mainz, a Homœopathic physician, who had studied and graduated in the College of Philadelphia some years ago. He happened to have in his library the works of Dr. Horn, which I had tried to get in vain. They consist of three pamphlets:

1. "The Cholera is an Intoxication of Cyanic Acid, Ozone and Todosmon Miasma, Proved by Dr. F. X. Horn, Munich, 1874."

2. "About the Causes Which Call Forth an Individual Disposition to Gain the Cholera, with Proofs Founded upon Magnetic and Electric Conditions."

3. "The Earth a Magnetic Pendulum. Proofs of the Causes of Cholera. Diminution of the Earth Magnetism a Second Important Agent for the Development of Cholera. Munich, 1874."

It seems to me that just at the present moment it would be important to save from oblivion the works of Dr. Horn, and verify the

experiments and observations upon which he bases his opinion, that the constitution of the air and weather are the principal agents in the appearance of cholera. This is the reason which has induced me to propose this subject to the attention of the honored assembly of the North American Institute of Homœopathy, with the request of having these pamphlets translated into English and published. I have just heard that some parts of Dr. Horn's works have already been made known to the public by the late Dr. Constantine Hering. The last news in yesterday's papers, that the cholera is beginning to reappear in Europe, renders the moment still more appropriate for the study of these works, which may prove useful to the promotion of health and security.

I will transmit these pamphlets to my honored colleague, Dr. Wesselhoeft, of Boston, and will ask him to look over these pamphlets and communicate his opinion to the Institute. They have been lent to me by Dr. Erwein, with the condition of their being returned to him.

Address of Dr. P. C. Majumdar.

Dr. P. C. Majumdar, of Calcutta, India, was introduced, and addressed the meeting as follows:

Mr. President, Ladies and Gentlemen: The honor you have done me is done to a country once civilized and intelligent, but we have nothing now to say about India. We have the country left, but not the former grandeur and magnificence. Our people never travel to foreign lands, and when I left Calcutta I was not acquainted at all with the lives and the manners of civilized people in different parts of the world. One thing that brought me here is the system of medicine introduced by the immortal Samuel Hahnemann, and I think the honor that you have done me in selecting me as the representative of India is through the instrumentality of that great man, the discoverer and the reformer of the medical science of the present day.

We cannot boast of many Homœopathic practitioners in our country. I can count them on my fingers' ends. There are only a few who are practicing in some of the big cities of India. We have only about a dozen in the city of Calcutta, and about another dozen distributed throughout the whole of so vast a country and so vast a population. In fact, you may say that it is like one drop in the

ocean. But we have our ancient medical literature and we have our ancient medical system to be invoked in my country at the present day. Though the Homœopathic system of medicine has been introduced in India, still they cannot destroy the whole of the physicians who practice our system of medicine before the advent of the Europeans in that country, and that is the reason that we had a very good medical profession in ancient times.

We are told that one of the gods is the promulgator of medical science in the world, and he took some poisonous substance into his body and made it a beautiful medicine. That is to say, he was not killed by that poison, but he became immortal, and he made that substance, which is the deadliest poison, one of the best medicines in the world. This, to my mind, shows the truth of what Hahnemann has said, that the deadliest poisons may be the best medicine if we can know how to prepare them and how to use them as medicinal substances. Arsenic, for instance, is one of the best medicines in Homœopathy, but it is one of the deadliest poisons that we know of.

Very recently we began to teach Homœopathy in India. We have a school of medicine, and we have also established a Homœopathic hospital only last year.

I have no material facts to give you as to the brilliant prospects of Homœopathy in India, but I wish to say that what we practice in India is pure Homœopathy; that is, such as Hahnemann taught, the purest in the world.

I am pained and grieved to see in some of the countries in Europe and here that there is a mixture of Homœopathy with Allopathy; but that thing cannot happen in our country. If we go to practice a little bit of Allopathy, we are discredited that we do not know anything about Homœopathy. The people have great belief in the system of Homœopathy, so when they require their treatment to be Homœopathic, they want pure and true Hahnemann from beginning to end.

We have very few books on Homœopathy in India; that is to say, very few books written by my countrymen there in English or in foreign languages. We have recently done something about this literature of Homœopathy in India by publishing a few books in our own language, and in this way we are trying to popularize Homœopathy among the vast population of India, and I think some day

we will be able to say that we have done much for the cause of Homœopathy in that vast country.

I thank you for your kindness and attention.

THE CHAIRMAN: I have to announce the following cablegram just received:

"Dr. J. S. Mitchell, Chairman World's Congress of Homœopathy: Greeting.—THEODORE KAFKA, Carlsbad, Germany."

Also from Dr. Alexander Villers, of Dresden, Germany:

"Regrets that I cannot be present at your meeting. I send best wishes for Congress and Homœopathy."

It is sometimes interesting to see ourselves as others see us, and I call upon our chaplain, Rev. T. G. Milsted, to address us.

ADDRESS OF REV. T. G. MILSTED, D.D.

Mr. Chairman, Ladies and Gentlemen, and Visiting Physicians of the Homœopathic Congress: There will be many subjects discussed in meetings held in this building during this week, but I choose as my subject for to-night what I think is the most interesting of all, namely, the doctors themselves. I have nothing to say this evening about the medicine part of this meeting. I am going to say a few words about the man part. The man part, I hold, is more important than the medicine part, for it is the man that can take the poison, to which our brother from India referred, and make it into medicine. You will hear this week about wonderful operations that can be performed and have been performed. How were they possible? Through the man that did them?

Now, in my profession, theology, the pill is everything. The pills are all made up for us, and all the minister has to do is to give them; and it is heresy in my profession to attribute too much to the man. Everything must go to the theological pill. But I know that that is not heresy in the medical profession, where honor, when it is due to the man, is gladly rendered. A diploma cannot make a good physician. The physician, far from borrowing his honor from the diploma, lends it what it has. A bright child said that she could tell true jewels from false from the kind of people that wore them; and so the diploma can be seen to be true or false according to the person that owns it, according to the name that is on it.

A great French artist, when looking on a gathering of rather licentious art students, said there were not half a dozen in all the

great assembly that would amount to anything, because, with all their technical skill, with their trained artistic ability, they had not the one great requisite for excellence in their profession, namely, character; that underneath all technical skill, underneath all smartness and ability, there was the deep substratum of life, character, out of which all good things proceed; and that great scientific man, Huxley, has said, and Herbert Spencer has quoted with approval the saying, "that the great discoveries in the scientific world have proceeded not so much from men of intellectual acumen as from men of deep religiousness of nature, from men of deep character." And so in the medical profession there must be such substratum of deep character for excellence.

A newspaper editor once said to a minister who had had a good deal of advertising, "Mr. Smith, the newspapers made you." "Ah, indeed," responded the minister, "make another."

How great is the power of the press! The newspapers can make and unmake a great deal, but I very much doubt, Mr. Chairman, whether even the newspapers can make a first-class physician.

Great and good has been the character of the medical profession. The doctors, as a general thing, have been true to the great responsibilities placed in their hands. They have been faithful in the issues of life and death. They have kept the sacred trusts reposed upon them. In the literature of the Christian centuries the name by which the man of Nazareth, Jesus Christ, is oftenest called next to that of Good Shepherd, is the Good Physician, and that shows the regard which Christendom has for the physician. The physician is the friend of humanity. He is continually banishing suffering and disease. He is discovering the demons that men have feared in their own ailments and then in banishing those demons. The physician is finding out the laws of health and then giving their blessing unto men; is finding out the laws and the forces of nature and applying them. Often, in the time of war, we are told that more men die in the hospital through the invisible foe than from the bullets on the field of battle; and if more are dying in the hospital in the time of war, how great we see is the harvest of death in the time of peace; and yet it is the doctors who are fighting for us this invisible form of disease. The doctors are also philanthropists. They are more than the mere friends of man—they are lovers of men. They are self-sacrificing where human interests are concerned.

It was said by an old Latin poet: "Whatever is related to man is not foreign to me." Such is the substance of it, and it is said that in old Rome the plaudits used to ring whenever that sentiment was uttered in the theatre. Those words of that old Latin poet have been adopted as the motto of one of the colleges here represented and not in Chicago.

Now, of course, all the good we have to say of the doctors belongs to the ladies as well as to the gentlemen. Indeed, if the women in the medical profession have the same experience that some of the men have had, the men will have to look out for their laurels. There is a woman preacher in our town who is very much beloved by her people, and they wouldn't think of exchanging her for any man. It so happened that on one Sunday when she was out of her pulpit another woman preacher preached for her; but this visiting preacher was of a rather coarse and masculine nature, and when she had got through the people turned up their noses and said, "We don't want any more of her; she isn't much better than a man."

Now, with all due respect to the ladies and with all good wishes for their success, may that fate be spared you gentlemen.

There is a connection more or less plain between the profession of medicine and that of theology. A great many people have gloomy views in general, and I think that springs from bodily ailments. A great many people think they are experiencing religion when they only have an attack of the dyspepsia. There is one church which in its Sunday service repeats every Sunday, "Good Lord, deliver us." I think it would be a very good thing if they should say, and if it could be done, "Good Lord, reliver us." Then, I think their health would be very much better.

In order that the doctors may always hold the high place in the future that they have in the past, progress is necessary. This is an age of progress which is just as possible in medicine as in nearly every other walk of life; and the physician must be a broad man of wide culture and knowing many things. He must ever be going onward. He must not be afraid of new discoveries as a great many physicians were afraid of the new discovery of Hahnemann. He must not be like the hunter who turned back when he struck the trail of the bear, because it was too fresh. A great many people turn back just where they ought to go on and achieve success. I heard of an old professor who was very successful when he started

out, but forty years afterwards his lecture-room was deserted, and he couldn't understand it, because his lectures he said, were just the same as they had been before.

The medical profession has had its full share of those who have advanced, from the time of Harvey down through Hahnemann, to many within our own day, and the mere fact that you physicians are gathered together here from all parts of the civilized world shows how much you desire progress.

Now I wish to say to all you who have come from distances that we want you to stay with us a long time, we want to get acquainted with you and want you to get acquainted with us, and I have no doubt that when our brother from across the water is acquainted with us he will much rather to live here than in Washington.

The Chairman, Dr. J. S. Mitchell, then delivered his inaugural address, as follows:

Inaugural Address of J. S. Mitchell, M.D.

Ladies and Gentlemen: When the proposition to hold a World's Congress of Homœopathic Physicians and Surgeons was first made by the World's Congress Auxiliary, it was felt by the Committee addressed to be a duty which it owed the profession, to see that proper arrangements were made for the holding of such a Congress. The plan included the selection of an advisory council, consisting of representative men in our school, of all lands. Correspondence with these demonstrated that the project met with cordial endorsement on the part of all. When at the meeting of the American Institute at Washington, D. C., in June, 1892, it was decided to hold the next session in connection with the World's Congress, its success was assured.

It was hoped that the attractions of the great Exposition together with those of the Congress would bring no inconsiderable number of our distinguished foreign confreres. It has been learned that comparatively few can be with us in person, but the responses to the requests of the committee for reports and scientific papers, have been hearty and extensive. Official and personal letters in large numbers have been received, which will be submitted at a later period to the Convention by the Secretary. We are grateful to those who have honored us with their presence and extend a hearty welcome on the part of all connected with the Congress.

We call attention specially to an interesting historic parallel: At the time of the Convention in 1876, the venerable widow of the illustrious founder of our school, then residing in Paris, sent to the Homœopaths of the world, with her greeting, a bronze bust of Hahnemann, cast from the marble one by David d'Anger which was affirmed to be a perfect likeness of that distinguished man. To-night we have upon this platform a model for an heroic statue of Hahnemann, to be erected at Washington, D. C., as soon as the necessary funds can be obtained, sent also from Paris, the scene of Hahnemann's latest triumphs.

The 400th anniversary of the discovery of a new continent is being fittingly commemorated by many occasions, but among the most notable are those connected with the World's Congress Auxiliary. Long after the grand and imposing architecture of the "White City" has faded from memory, long after the beautiful, the costly, the useful and attractive exhibits it enshrines have been forgotten, the records of these gatherings of prominent men and women of all climes and shades of belief will endure. In the tomes that will be left in every public library in the civilized world will be inscribed the best thought of the ablest minds in all departments of human activity.

It was a fine conception to bring together so many representative men and women at a time when the highest products of art are being exhibited. No occasion could be more fitting and none more likely to effect desirable results. There is no standard by which we can measure the work of such a convention as the one we inaugurate to-night. Its programme outlining the week's labors, by no means tells the whole story. Its general meetings, at which addresses on topics of wide interest will be presented and calmly discussed, its sections in which papers on special subjects will be read and debated with a completeness that no other method offers, its committee meetings at which our most trained minds will quickly draw those conclusions which are fraught with the best interests of the cause—these indeed are the main features. But we must realize that there is always in gatherings of men and women of such large proportions as we now see, far more than can be estimated by actual results. The casual remarks, the unspoken thoughts, the emulative spirit aroused, the constant interchange of views during interims, and that mental attrition which, though it gives immediately no

scintillation, yet at some time may electrify the world—aggregate in the end a train of forces from which, later, a universe gets the reflex.

Most of the congresses that are to be held can boast of records extending through a long series of years. Centuries sometimes count for but little in human thought. Medicine is as old as man. Charon taught his pupils in the recesses of a Thessalian grotto. To-day every civilized land has its medical colleges, and some of them are palaces of science. The school of medicine which is represented here to-night has only eighty-three years of existence. During this brief period it has a history whose page is more attractive than any other in the development of medicine; whether we take the personal career of its illustrious founder, the records of the labors of his disciples—often conducted under disadvantages and trials that would have appalled the stoutest hearts—or the results that have accrued to humanity in many lands through his teachings.

The reform in medical practice inaugurated by Hahnemann, and which his followers have so successfully carried out to a fruition acknowledged even by the testimony of opponents, constitutes one of the world's epochs. Time is wanting, nor is the occasion opportune, for an adequate *résumé* of Hahnemann's work or an enunciation of his principal tenets. But we may be pardoned for a glance at the record of our school; for an attempt to show the position it to-day occupies in the world of medicine and for a brief reference to its destiny.

The first complete promulgation of Homœopathy by the *Organon*, which has been termed the Bible of Medicine, was in the year 1810. Hahnemann, after his conception of its main truth, had devoted a number of years to long and patient study. His scientific spirit was sublime. He did not promulgate his law of cure until it had been tested by experiment and deduction to such an extent that his admirers have always been amazed at his research.

During fifteen years he proved on his own person more than sixty drugs, collated all the data concerning them, and then presented his views deduced from this long experience, tersely, logically and in harmony with true scientific methods. Sir John Forbes, the acknowledged head of the English profession of medicine, who had no faith in Homœopathy, had sufficient frankness to say in 1846, three years after the death of Hahnemann:

"No candid observer of his actions, or candid reader of his writ-

ings can hesitate to admit for a moment that he was a very extraordinary man—one whose name will descend to posterity as the exclusive excogitator and founder of an original system of medicine, as ingenious as many that preceded it, and destined probably to be the remote if not the immediate cause of more fundamental changes in the practice of the healing art than have resulted from any promulgated since the days of Galen himself; . . . . he was undoubtedly a man of genius and a scholar; a man of indefatigable industry and of dauntless energy."

But all his contemporaries were not thus unprejudiced. The persecution of Hahnemann is one of those records of human experience we would gladly blot from the page of history. It would be sad indeed to contemplate the life of a great reformer, even as late in the world's history as Hahnemann's day, did we not know that such noble souls are helped through their almost crushing trials by divine aid. The unpopularity, the danger, the ostracism endured is patiently, bravely, and almost cheerfully borne until the end, because such men are endowed with an heroic spirit that knows not depression. The world has seen many heroes, but none so worthy of the immortality now assured, as that grand old man of medicine, Samuel Hahnemann.

The early progress of Homœopathy was slow. Like all great reforms it had to encounter opposition, ridicule, and derision. Its inherent strength enabled it to survive all these, and its growth was steady during the first years of its existence. A great reform is like a sea. It may be calm at any time, but at others its force is irresistible. A successful reform must recognize the evils of its day with perfect clearness, and seek their remedy with determination. It must stimulate thought and action upon the part of intelligent supporters. It must appeal to reason and invoke the aid of logic. Our reform in medicine has fulfilled all these conditions.

It is a marvel when we remember the short period the world has had before it this idea, that it now has its thousands of adherents, its long list of associations that requires page after page of the American Institute proceedings to enumerate and its millions of believers. Even journalism claims to have been in existence since the days of Christ, although printing was not discovered until 1456. All the great reforms of the day will point through their advocates to periods dating from one to many centuries. We cannot even celebrate a

Centennial, and yet we are prepared to demonstrate that, measured by the amount of work accomplished, the benefit the world has received from Homœopathy is incomparable. It has not alone been directly effected. Like all great reforms it permeates in more directions than are manifest except by critical study. There is a reflex influence that extends to all classes of mankind. The modifications of existing parties which a new sect of any importance soon influences, is one of its most pronounced features, and one which oftentimes is not given due credit. No great idea was ever held by its adherents alone. The unconscious influence of Homœopathy pervades many medical minds that would scorn to give it right expression. The silent thoughts of the people are woven into the mighty web of their existence.

Since its firm establishment in America its progress has been in an ever increasing ratio.

In 1876 the first World's Convention was held in Philadelphia at the time of the Centennial Exposition. In his inaugural address, the President stated that there were then 5000 physicians in the United States. Less than two decades after, at this assembling, we are able to assert that there are 12,000 in this country. This makes an army whose presence is not to be despised. In many other countries the growth of Homœopathy has been remarkable, but it should be noted that in this land where freedom of thought and political action is most pronounced, its adherents are most numerous. It sometimes looks as though this country would profoundly influence the spread of Homœopathy throughout the world. Even now the isles of the seas contain our physicians educated in this country. The papers to be read at this Congress from Australia and the Sandwich Islands are by graduates of American colleges. We do not undervalue the labors of our colleagues in other lands than our own, but the existence of our twenty colleges gives us a mighty power.

The steady gain in our ranks, the increase in the number of our colleges, hospitals, dispensaries and journals, has done much to batter down the opposition formerly urged against us and to establish for Homœopathy a position equal to that so long enjoyed by the dominant school.

We are recognized by the Government of a great nation in the various departments of this great Exposition. We have Homœopathic headquarters on the Exposition grounds upon land assigned

us by the Directory, which we dedicated with appropriate exercises to-day. We have a collective exhibit of our colleges and hospitals in the Government building, a special college exhibit in the Department of Liberal Arts; in the Woman's building an exhibit from the London Homœopathic Hospital, of the work of trained nurses, and a hospital under the charge of medical women of our faith; and last, the recognition of our school by the World's Congress Auxiliary.

When, however, we enumerate the whole list of our adherents, when we have fully announced our present status everywhere, we can truly say Homœopathy is not then completely demonstrated. There is something majestic in the steady flow of a mighty river, but grander still is the unconscious influence it unceasingly exerts upon the ocean into which it pours its mighty waters. Steadily, almost imperceptibly, Homœopathy has forced its way into all forms of medical belief—it has modified the practice of the Old School, compelled it to make its drug form more minute and palatable, and even to admit, in a guarded way, its cardinal truths.

It ought to be stated in every such assemblage as this, in simple justice to the illustrious founder of our school, that he did not denounce medical science except as it related to his own teachings, and that he did not believe after his works were published, that the evolution of medicine would cease.

Homœopathy has stood the severest of all tests; that of time. Other medical faiths have usually perished with their founders. Herbert Spencer says: "The failure of Cromwell permanently to establish a new social condition, and the rapid revival of suppressed institutions and practices after his death, show how powerless is a monarch to change the type of the society he governs."

Yet we see, fifty years after his death, the illustrious promulgator of this great medical reform still profoundly affecting the whole medical body politic, and accomplishing what a powerful ruler endowed with an iron will and sovereign ability could not.

It is characteristic of genius that it possesses fulness. There is something wonderful in the works of the great men who have domited the world of thought. The wisdom of Shakespeare shines just as clearly as it did when first enunciated. The lapse of time does not in the least dim its lustre. Milton's great epic is not yet excelled. The discoveries of Laennec in auscultation have received comparatively

few additions since his day. Hahnemann's reformation of medicine has had more influence upon practice in all schools than the combined results of the labors of all other discoverers in medicine. Who can predict, in the light of the wondrous growth of our cause since its first promulgation, what a few more decades will accomplish? Time adds steadily to its laurels, to its influence and to its dissemination.

Homœopathy has passed the stage of discussion, of controversy, of argument; it is now a firmly established science. Do not confound it with arts and judge it by their standard of progress. It is a long period since the Centennial in Art, but in Science scarcely a day. Centuries of use of such familiar drugs as quinia and morphia develop the fact that our opponents still differ as to their application.

Hahnemann's inspiring spirit still rests upon his followers. Consider the work spent upon our Materia Medica. Science possesses few greater instances of human industry and research. Allen's *Encyclopædia* and the *Cyclopædia of Drug Pathogenesis* will long remain as the monuments of those who created them. The thoughtful of our faith realize the imperfections that still exist, but so far from bringing any discouragement, they are incentives to further work. Science is always fresh; in whatever paths you travel it, it leads to new facts and thoughts. Therein is one of its charms to its devotees. There are always "new worlds to conquer."

It is proof that our science is not perfect, that we are here to-night in grand convention assembled, to testify to this fact and to take measures for its further development. Those who grow impatient and think our pace too slow should meditate on the rules that govern progress in all departments of human thought. Instead of being behind in the march of civilization, we are continually at the fore. No charge that it is a laggard can be truthfully directed against Homœopathy. It has grown from a little band of students of therapeutics to a great school of medicine. In our deliberations this week we shall convene in nine sections, embracing all the main divisions of medical science and art; and complete as is this list, it would have been longer but for the fact that another Congress which embraces climatology, meets this week under the chairmanship of a member of our school, and still later in the season, one on Public Health. At our first World's Congress in 1876, few papers on surgery were presented. But they were of high order and indicated that our School was progressive. We shall now, in the different

sections have nearly the whole range of surgery covered. In the specialties in medicine we had little representation in 1876. To-day we have as skilled men in them all as may be found in any school; and the creation of a new one by one of our number, challenges the profound attention of medical minds.

Jorg, the German professor, in 1825 sought to controvert Homœopathy by secret experiments with his pupils. However, as will always be the case when a judicial scientific investigation is made, he only served to establish it on a firmer basis. Coming years, it is now clear, will bring—not only on our part, but that of our opponents—the application of every new test to the demonstration of its law and corollaries that modern science and the evolution of medicine will originate. But its believers stand in no fear. Whatever modifications may be effected, we rest with sublime confidence in the view that its methods will, in the main, be, eventually, universally adopted. This is not simply a hope; it is a conclusion based upon premises that careful consideration will, we feel sure, deem valid. In the possession of the elements of every successful reform, in its firmer establishment after the death of its founder, in its marvellous growth, in the intelligence of the clientelage its practitioners secure, in its consonance with the rigid requirements of science, lie the deep foundations of our convictions.

And there is an immense amount of work still to be done. Macaulay sums up the vicissitudes that attend the building up of a new science when he says:

"The improvement of a science is gradual and slow. Ages are spent in collecting the material, ages more in separating and assigning them, and even when a system has been formed there is still something to add, alter or reject. Every generation enjoys the use of the vast hoard bequeathed it by antiquity, and transmits that hoard, augmented by fresh acquisitions, to future ages."

The development of any science being necessarily slow, that of medicine presents almost insuperable obstacles. It is based on the collation of an immense amount of data. These refer not only to a most complex organization, but one constantly under varying conditions; hence deductions from them must necessarily be varied and uncertain. Yet, in spite of this, while subject in the main to these impediments, Homœopathy has developed fast in the number of years it has been in existence. This is due to the fact that it has

steadily been ruled by law. Empiricism has not governed its progress.

As one illustration of the labor before us, we may instance that recent advances in medical science involve a new outlining of Homœopathic provings; it will, doubtless, be shown fully by the papers and debates during this week, that we shall now have to bring our distinctive work in relation to all new planes of thought and action. So vast is this undertaking that it will require separate colleges, with complete laboratories, for its successful culmination.

Particularly is Homœopathy in closer touch with that growing spirit in the profession—to give a larger attention to the unquestioned source of a prominent part of all disease—the mind. It is on this very ground that Homœopathy has won some of its proudest laurels. The success of our school in the State Insane Asylums at Middletown, N. Y.; at Westboro, Mass.; at Ionia, Mich.; at Fergus Falls, Minn., has induced California to lately place one in charge of a Homœopathic physician, and we trust will soon secure from the legislature of the State of Illinois another. Not matter, but mind, is to-day the world's new balance-wheel. Our School will have to devote its energies further in this department which promises such brilliant advances in our treatment of disease.

The Homœopath of to-day is far different from the believer of seventy-five years ago. He has kept pace with the development of medicine, he has added to his armamentaria every other effective method of cure, no door is shut to him, he recognizes the value of physiological therapeutics, and that they are governed by principles that are often strictly scientific. No one can claim to be a physician in its widest sense unless he is of liberal mind and accepts the whole of medical truth.

But we are obliged to cling with tenacity to our organization, both to maintain our existence and to extend our views among people of every land. Our position as a sect was forced upon us by opponents. We are only battling for the enthronement of the principles of our own faith.

Medical liberty is as sacred as political or religious liberty. Every encroachment upon it must be faithfully and zealously resisted by those who are entrusted with its preservation.

Webster said: "We must fight the germ of unjust power." It is

our duty to fight not only the germ of medical intolerance, but its whole horde of chemical combinations.

The profession of medicine has but one great stigma—the persecution of Homœopathy. It steadily keeps passing retroactive laws that are the opprobrium of justice. Like many other sad pages of human history, most of this opposition is based on misunderstanding. With a better conception of what Homœopathy is and of its aim, it is probable that many of the bars now separating the great schools of medicine would be broken down. It will only take a few more World's Congresses before this blot upon the fair escutcheon of a noble calling is forever wiped out. In all other directions the admiration and respect of the people of every land go out to the medical profession. It labors with an unselfish devotion to human interests to which the world furnishes few parallels. It lays down its life on the altar of duty. In the face of an epidemic from which even trained soldiers flee, it calmly and faithfully stands at its post. It shrinks from no risk which any exigency it may encounter necessitates. It sacrifices comfort, social life and recreation when human life is at stake.

It brings light into all homes with its benign influence for everything good, for everything hopeful, for everything that can afford succor in time of distress. It is the comfort of the weary, the hope of the misanthrope, the deliverer of the sick and the rescuer from death. Will such a profession always manifest intolerance? We answer: No. Do you think me sanguine? Only last week, during a brief interview—and this incident so recently taking place confirms some points already made in this address—a prominent member of the Woman's Congress, the wife of an Old-School physician, in a three minutes' speech, delivered one of the most eloquent, though terse panegyrics on Homœopathy, from the standpoint of a non-believer, ever made. It would have graced this platform. It was from the lips of an earnest, noble woman, whose name is known in every household where the sweetest of all things, charity, is cultivated.

We see the Hindoo, so widely differing from us in religion, in manners, in customs and in dress, yet in that character alone in which no one thinks it an affront to be considered—as a man—our peer. Upon this same platform, will soon sit the representatives of

all religions, discussing on common grounds its cardinal truths. With the leveling of caste, the battering down of deep-rooted prejudices, the development of the brotherhood of man, which such congresses will secure, it is fair to assume that eventually we shall have our school of medicine recognized by the whole profession. He is a shallow student, and a man of narrow mind, who sees only in his little circle all there is of truth. Even the blind groping of the savage heart is to be noted and directed; for, many times in its yearnings, there are hopes that we, who are so much more favored, might have fulfilled.

Hahnemann was a full century in advance of his time. Had Homœopathy been sprung upon the medical profession of to-day, it would have eagerly seized it and investigated it with a calm, judicial spirit never yet manifested. Bergeon's method, Koch's lymph, Brown-Séquard's elixir, and Organopathy, have had only brief and humiliating careers. In view of these, are we not justified in demanding from our confreres of other schools a more critical, impartial investigation of Homœopathy?

With effulgent light, in contrast to such uncertain methods, stands Homœopathy, the science of Therapeutics. Hence its *raison d'être.* The shafts of ridicule have not annulled its claims; the persecutions of former years only made more numerous its adherents; ostracism and proscriptive laws still more closely bind its followers, and weld them into so compact and determined a band that it is irresistible; for, however lacking in numbers it may be, the strongest force that moulds this world is a party of men with a righteous cause—a cause whose alpha and omega is truth.

We care not, as Homœopaths, what rigid scientific investigation may lop off—for much that is called Homœopathy has little relation to its main truth. We stand serene in the face of any test that may be applied, in the light of the experience of the master and his thousands of followers who have, all these years, patiently delved in the mine whose golden depths he first laid open. The iconoclasm of the nineteenth century, which so ruthlessly tears down one after another of our cherished idols, has thus far only served to place Homœopathy on more solid ground.

It stands comparison with the more intricate development in other departments. Music has grown much more complicated; it has taught us to resolve discords into harmony, it has evolved higher

coloring. Everything tends to be more subtle. Hence, we must have more artists in medicine; men who can grasp fine points. We do not always get perfection, even in artists. They sometimes treat us to a faulty pose. We need not only artists, but artists of genius. Hahnemann was the first and greatest artist medicine has yet seen. He recognized the eternal fineness of everything human. In his abstraction from the crude and coarse, he was far in advance of his age; hence, medicine must yet come to him for inspiration.

There are some of the profession who are much distressed because we are not agreed on all points. It is true, that wherever there is a difference it is likely to widen, but the different views which men hold often serve to make them more interesting, providing they manifest a tolerant spirit toward the opinions of others. Those who look for perfection will be continually doomed to disappointment. There is no perfection except in an opening of new vistas. The higher the power of the microscope, the greater its revelations. The larger and finer the lens of the telescope, the more worlds it reveals.

Homœopathy stands pre-eminently fitted to adapt itself to the finer adjustments that are coming in all directions. It will blend with all valuable developments that the medicine of the future evolves, for its basis is truth.

"Marble and recording brass decay,
And like the graver's memory, pass away.
The works of man inherit, as is just,
Their author's frailty, and return to dust.
But truth divine forever stands secure;
Its head is guarded as its base is sure.
Fixed in the rolling flood of endless years
The pillar of the eternal plan appears,
The raging storm and dashing wave defies,
Built by that architect who built the skies."

The Congress then adjourned until 10 o'clock on Tuesday morning, May 30th.

SECOND DAY'S SESSION.

TUESDAY, May 30, 1893.

The Congress reassembled at 10 o'clock.

Dr. I. T. TALBOT, of Boston, Mass., said: Members of the International Homœopathic Congress of Physicians and Surgeons, I am requested, as the honorary President of this body, to introduce to you, as the presiding officer of this Congress, one to whom we are indebted for the inception of the Congress and to whose labors we owe the successful manner in which it has been brought to this time—Dr. J. S. Mitchell, of Chicago.

Dr. J. S. MITCHELL: *Ladies and Gentlemen:* When the proposition for a World's Congress was first made to the local committee by President Bonney of the World's Congress Auxillary it was decided that it would be wise for the Homœopathic profession of the world to avail itself of the invitation. The local committee immediately went to work and at the meeting of the American Institute at Washington it was decided by a committee appointed by the Institute, together with its Executive Committee, and by the Committee of the Auxiliary Council, that a committee consisting of the Chairman and Vice-Chairman of the two congresses—men and women—and the President and Vice-President of the American Institute should constitute a Committee to appoint distinguished members of the profession to prepare addresses and to take charge of the different sections. This committee, after many meetings, settled upon the arrangement which you will find in the programmes before you. The committee of the American Institute and the Executive Committee, together with the Committees of the Congress, have labored during the year and a half that have elapsed since the first inception of the Congress. Some thirty thousand circulars have been sent throughout the world announcing the details of the Congress. The World's Congress Auxiliary sent to the ministers of our country in all lands official notification of the manner in which the work was to be conducted, with a request that such notifications be sent to all physicians of the Homœopathic faith who could be reached in those countries. In addition, the Committee on Foreign Correspondence, consisting of the Chairman and the Secretary, have sent to all Homœopathic physicians throughout the world embraced in

Dr. Villers's Directory, copies of the circulars and also official and personal letters, stating the objects and aims of the Congress and requesting their co-operation. Many reports have been received from these. They have been very cordial and have expressed great hope that the Congress would be a success, and that its influence upon Homœopathy will be marked for all time.

It was moved and carried that the Rules of Order of Business, as given in the circular already issued, with the substitution of 10.30 for 10 A.M. as the hour of daily meeting be adopted as the order of business for this Congress.

THE CHAIRMAN: The next business on the programme is an address by Dr. William Tod Helmuth, of New York City. Dr. Helmuth is unavoidably detained and I will call upon Dr. A. S. Couch to read his address.

ADDRESS.

SURGERY IN THE HOMŒOPATHIC SCHOOL.

By William Tod Helmuth, M.D., New York, N. Y.

It is time that the early history of surgery as connected with the Homœopathic School of Medicine, be placed upon record. In another decade it is probable that the few desultory records of it which belong to the first period of Homœopathy in this country will be lost. There can be no more fitting time, nor more appropriate occasion for this than our Columbian year, a year that will rear an everlasting monument upon the pathway of the history of medicine, and especially upon the history of Homœopathy, throughout the world.

It would be out of place even if it were possible, to attempt to produce in an address of this character, a detailed account of the surgery and surgeons of our school, as it stands in the United States to-day, or has stood for the last quarter of a century. It would be a work of supererogation. Our medical colleges flourish all over this broad land, each teaching a full curriculum, thus necessarily embracing instruction in surgical science. These institutions have their records, their published reports, their archives and their alumni to give the once-neglected branch her proper niche in the temple of Æsculapius. Our medical journals and the published transactions of our societies furnish ample proof of the steadily growing interest in every department of surgery, and exhibit the undeniable ability of our surgeons. Such facts and such men need no mention here. The humble endeavor of this paper shall be: First, to rescue from oblivion some facts that belong to our surgery up to the year 1870, which, perhaps, are not very well known, and thus, by giving them place in the Transactions of this Congress, to ensure their safety for future generations and as a basis for a more extended history; and, second, to speak of surgery as a factor—and a powerful one—for the extension of Hom-

œopathy, and as a means for elevating it in the estimation of the community at large.

After some careful study of the subject, I think I may be able to show, strange as it may appear, and meagre as are the sources from which information can be obtained, that certain of the great operations of the last ten or fifteen years, which have so astonished both the profession and the public—with the details of which the medical periodicals have teemed, and the results of which have been so brilliant, have been discounted by the earlier Homœopathists without antisepsis, and some of them, perhaps without anæsthesia. I have no doubt, however, when I have recorded these cases, that a smile of incredulity, or a sneer of unbelief, or a sniff of ridicule, or a wholesale denial of facts, one or all of them will fall from the Old-School man who dares peruse our TRANSACTIONS; but I place the facts upon record, because the time will come when with the shout will reverberate "palman que meruit ferat."

When in 1825, Dr. H. B. Gram brought Homœopathy to the notice of the profession, those gentlemen who first began to study and practice according to its precepts were all medical men; and such surgery as came under their notice they eagerly turned over to any one who would take it. In New England, during the quarter of a century which elapsed between the landing of Gram and 1850, in which year I began to take cognizance of the field, Dr. Fuller (Homœopathist) occasionally performed surgical operations for his friends and Dr. Winslow Lewis and Dr. George F. Gay, both skillful and liberal men—though belonging to the Old School—would render such surgical service as requested by the Homœopathists.

In New York, among the Old-School men who would hold surgical consultations with the Homœopathists were Dr. David Hossack and Dr. Carnochan—honor to their liberality of spirit. There is the name of one, however, whom I must mention here, who, seeing the ostracism to which the Homœopathists were subjected, and the difficulty in securing consultations in surgical or medical practice, suggested that the Homœopathists should create specialists among themselves, and thus be better qualified for consultation with each other. I allude to Dr. John A. McVickar. Dr. McVickar was born in 1812, was graduated from the College of Physicians and Surgeons of New York in 1833, and was appointed to the chair of Clinical Midwifery in the University of the City of New York

in 1839. The next year he embraced Homœopathy, and was (such was the spirit of the times), shut out immediately from all the avenues of medical advancement, and the New York Academy of Medicine closed its doors upon him. He chose surgery as his specialty, re-matriculated at his Alma Mater, to perfect himself in anatomy and was of great assistance to his brother practitioners. He was a careful and skillful operator, and a warm personal friend of my own when I first arrived in New York.

In Philadelphia where the strife was more concentrated and severe, perhaps on account of Hering's growing popularity and success, the only Old-School surgeon who would consult with the Homœopathists was Dr. Paul Beck Goddard, a brilliant and successful surgeon, who allowed to every man the rights he claimed to himself and hesitated not to consult with the then "despised sect" for which he received the maledictions of his Allopathic friends, who threatened to expel him from their societies and close the doors of their institutions upon him. I was but a boy then, and remember my pride when, just beginning to study medicine, the assistance that this liberal-minded man gave me in studying the surgical anatomy of Stone, through the medium of Dupuytren's posthumous plates. Indeed, I may say it was through these investigations and the dissections that followed them that I determined to devote my life to surgery, a branch of science which, I grew to be painfully aware, was very much neglected by the Homœopathists. Ten years after the arrival of Dr. Gram and on Hahnemann's birthday—viz.: April 10th in the year 1835, the North American Academy of the Homœopathic Healing Art was founded at Allentown, Pa. In its first circular* in Article XXIX. among the list of studies which are considered indispensable for the complete education of the physician, the word "Chirurgini" occurs; and that is the only mention made of surgery in the entire pamphlet. Having learned that Dr. William Wesselhoeft was the incumbent of that chair I proceeded to make the necessary inquiries of one of his distinguished relatives† and find that he was graduated by the University of Jena, in 1820, came to America in 1824, settled in Pennsylvania and began to

* First circular of the North American Academy of the Homœopathic Healing Art, Phila., 1835, p. 24.

† Private letters of Dr. Conrad Wesselhoeft, Boston, Mass.

practice Homœopathy in 1828. Dr. Wesselhoeft had a *penchant* for surgery; and especially was he skillful in the management of fractures and dislocations. He was said to be pre-eminently semper paratus, and many are the traditious records of his skill that to-day float round the country where he resided. I have also learned from Dr. John Detwiller of Eastern Pennsylvania that his father, Dr. Henrich Detwiller,* who was also connected with the Allentown Academy, performed many serious and capital operations in his vicinity. Dr. Detwiller came to America in 1817, and has the honor to be the first physician to prescribe a dose of Homœopathic medicine in the State of Pennsylvania. His son, Dr. John Detwiller, with whom the author has a warm personal friendship, is the lithotomist of his district, and his collection of vesical calculi is unique in its variety.

It gives me pleasure to place on record, in this connection, one of the remarkable surgical procedures performed by one of our own school, and which perhaps is not widely known, and one which, as far as I know, has not yet been equalled anywhere. The operator was Dr. John Ellis, now in advanced age and retired from practice, but very well known to the older Homœopathists for his zealous devotion to their cause when the strife raged fiercest. In these days of anæsthesia and antisepsis, with the use of animal ligatures and the better environment of the patient, many brilliant results have been secured in the ligation of arteries; but, so far as I know, and so far as I can learn from considerable research, this double ligation of the common carotid below the omohyoid (the interval between the placing of the ligatures being only four and one-half days *with recovery*—and those last two words are important) has not been equalled in the world as yet. In the Gross table† of thirty-six cases of "ligation of both carotids" I find Mott's case "interval of fifteen minutes, patient died." Murdoch's case, "interval of three days, patient died." Lewis's case of "five days, patient died." The first ligation was performed on October 21, 1844, at Grand Rapids, Mich. The patient, aged 21, was engaged in setting a trap in the woods, and was mistaken for a bear as he was stooping and received the contents of a rifle. The ball struck him on the left side above the

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* Private correspondence from Dr. John Detwiller, Easton, Pa.

† *Gross's System of Surgery*, vol. i., p. 784.

spine of the scapula, passing out after making a flesh wound of 2½ inches, and entering the neck at the centre and posterior edge of the sterno-cleido mastoid, passing up through the centre of the tongue, and out of it to the right of the medial line, knocking out several teeth and emerging through the upper lip. The wounds were properly dressed, but on the night of the seventh day, quite a severe hæmorrhage occurred from the tongue, which was arrested by compression. The next night, another severe bleeding took place, and Dr. Ellis tied the left carotid below the omohyoid. On the eleventh day another severe bleeding followed which was arrested temporarily, by pressure, but the next day a second hæmorrhage of such severe character followed, that it became necessary to ligate the right common carotid.

The patient recovered, the ligature from the left vessel coming away on the seventeenth day, that from the right on the fourteenth day.* This is one of the cases I here offer for the consideration of all surgeons in all schools; and would say that perhaps it was the treatment adopted afterward by the doctor, that assisted in relieving the congestion that followed, and thus rendered the remarkable operation a success.

About four years after this surgical achievement the Homœopathic Medical College of Pennsylvania was founded, viz., 1848, and its first Professor of Surgery was Francis Sims, M.D., a graduate of the University of Pennsylvania. Dr. Sims was a good lecturer, and did whatever operations came to him, which I must say were very few,—for in those days the people were not disposed to trust any one with a knife, who believed in the globulistic quackery. During my three years' studentship in the old institution, I think there were but four operations performed before the class, and none of these could be classed among the capital ones of surgery. Dr. Sims was followed by Dr. Jacob Beakley, who afterwards held the Chair of Surgery in the New York Homœopathic Medical College.

On January 30, 1852, Dr. B. L. Hill, Professor of Obstetrics in the Homœopathic College of Cleveland, Ohio, issued a circular to all Homœopathic physicians, asking their assistance in the preparation of a forthcoming work on surgery. Those who contributed articles on surgical subjects were Drs. Neidhard and Kitchen, of

* *New York Journal of Medicine and the Collateral Sciences*, September, 1845, vol. v., No. XII., p. 187; also Velpeau's *Operative Surgery*, vol. ii., p. 377.

Philadelphia, Dr. Shipman, of Chicago, Dr. Powell, Lexington, Ky., Drs. Teft and Beckwith, Norwalk, Conn., Dr. S. M. Cate, Augusta, Me., Drs. Babcock and Foote, Galesburg, Ill., Dr. Rogers, Farmington, Ill., Dr. Sharpe, England, Dr. Rosa, Painesville, Ohio, Dr. A. Bauer, Dr. W. Owens and Dr. Park, of Connecticut. This book did not appear, however, until 1855, about two months after the publication of my own work, and the complete title is as follows, *The Homœopathic Practice of Surgery, together with Operative Surgery*, illustrated by two hundred and forty engravings. By B. L. Hill, M.D., Professor of Obstetrics and Diseases of Females, and late Professor of Surgery in the Western Homœopathic College, and James G. Hunt, M.D., Professor of Surgery in the Western Homœopathic College, Cleveland, Ohio. J. B. Cobb & Co. 1855.

The second part of this work, viz., the operative portion of it, was taken from the *Lectures on American Eclectic Surgery*, published several years before. This book comprises 653 pages. It never passed to a second edition. My own work bearing title of *Surgery and Its Adaptation to Homœopathic Practice*, by Wm. T. Helmuth, M.D., illustrated with numerous engravings on wood. Philadelphia: Moss & Brother. 1855. Comprises 652 pages. And I am happy to say, through the kindness of my friends, it is still in existence, having gradually passed to its fifth edition. In 1851 Dr. B. L. Hill, on several occasions, successfully performed lithotomy and other operations. In those days the opposition of Allopathists to everything Homœopathic, handicapped those of our own school who attempted surgical performances. If an error should chance to be committed, or an operation prove a failure, or the patient succumbed, such results were given as additional grounds to prove the incompetency of the Homœopathists, and as another reason why they should be swept from the face of the earth. Suits for malpractice were instituted upon slight deformities after fractures, and every impediment placed in the way of our school advancing in surgical practice. Dr. S. R. Beckwith, who in 1853 amputated at the hip-joint and in 1854 removed successfully a large ovarian tumor (quite an exploit in those days) had, on one occasion amputated the thigh of a patient of Dr. Wheeler, a venerable, dignified old gentleman, a brother-in-law of Gen. Wool. The second day after the operation Dr. Wheeler was visiting his patient at the Weddell House in Cleveland, when Prof. Ackley (Old School) entered the room, and ordered Dr. Wheeler

to leave it, stating that "It was damnable enough for little-pill doctors to be allowed to practice medicine, but they should not practice surgery." Upon Dr. Wheeler refusing to obey the peremptory and unreasonable demand, Prof. Ackley seized him by the hair and dragged him into the hall. The affair ended by Dr. Ackley being placed under four thousand dollars bond to keep the peace, and by Dr. Wheeler ever thereafter combing his hair over a bald spot on the side of his head.*

Dr. Beckwith was for a long time Professor of Surgery in the Western Homœopathic College, and did much in that day to extend Homœopathic surgery in the West.

In 1855 Dr. I. T. Talbot performed, if not the first, among the first, successful tracheotomy in this country. By the term successful is here understood, not that the opening of the trachea and insertion of the tube were accomplished, but that the patient recovered † I draw attention to this success, as another to show how surgery flourished "under the rose," and to record the facts that here and there, important operations were done and remained unheralded, but like the truth when crushed to earth has risen again to testify to the abilities of men who loved Hahnemann and Homœopathy.

I need say no more of Dr. Talbot's position and teaching since those early times. It is a matter of record. The man stands before you to-day covered with honor.

I have already recorded two surgical triumphs: Let me proceed to a third. The surgical world, within the last ten years, has been deeply interested in the advancements made in abdominal surgery; or, I should more properly say, intestinal surgery. The wonders that have been accomplished by intestinal anastomosis; the ingenuity exhibited in the invention of sutures, plates of animal and vegetable substances, the methods of sewing, etc., are esteemed among the "most advanced of the advancements" that belong to modern surgery. The records of these cases in the medical periodicals are so remarkable that the doctors are surprised and the laity astounded by them. Let me now recount to you the record of a case, in which four feet and ten inches of the intestines were resected,—an intestinal anastomosis skillfully made, with complete recovery, with the extraordinary addition that the patient underwent all the dangerous

* MS. furnished the author by Dr. S. R. Beckwith.

† Personal letter of Dr. I. T. Talbot to author.

symptoms of strangulation of the intestine, by two serious operations, being four months pregnant, went on to full term and was delivered of a healthy child. The operator was no other than Dr. George D. Beebe, to whom also I lectured on anatomy in the Homœopathic Medical College of Pennsylvania, and who was a college chum of the late lamented Dr. George A. Hall. At the time this remarkable operation was done, nearly a quarter of a century ago, I was editing the *Western Homœopathic Observer* in St. Louis, and as many comments were made upon it in both the secular and medical press, I wrote personally to Dr. Beebe for a brief description of the case. Here it is. He says:

"I hasten to accept your friendly invitation to communicate the notes of an operation for hernia recently referred to in the public press, and as the pages of your valuable journal are always full of useful material I will be brief.

"On July 10th I was called to see Mrs. J. B. Childs, of Lee Centre, Ill., who was temporarily in our city for a visit, and while at the house of a friend was taken with most violent pain in an umbilical hernia, from which she had suffered since the birth of a child, seven years previously. On reaching the patient's bedside, I found a large tumor at the umbilicus, the thin integumental coverings of which were greatly discolored, and were on the point of yielding to the pressure of a considerable quantity of fluid therein contained. The patient had vomited for two or three days, and during the twelve hours preceding my visit the vomiting had been stercoraceous, with frequent hiccough. The skin and pulse did not show any marked peritoneal inflammation, but there seemed no apology for further delay in ascertaining the condition of the hernial mass. A careful incision of the integuments liberated a quantity of dark, bloody serum, and this escaping revealed a mass of gangrenous intestine. With a grooved director the hernial sac was freely laid open, when I was startled to find so much of the intestine involved and the entire mass not only black with discoloration, but at points yielding and emitting fæcal matter. The situation was novel and without precedent, but a moment's reflection satisfied me that the patient's chances for life lay in removing the devitalized tissue, and pursuing such further steps as would subject her to the least hazard possible under the circumstances. With the assistance of two or three of my medical colleagues, whom I could hastily summon to my aid, I

traced the gut to the hernial ring and, finding sound tissues there, divided it, and passing a strong suture, secured the sound extremity to the margin of the incision. Then, with a pair of scissors, I cut the intestine away from the mesentery throughout its extent until sound intestine was found at the opposite side. Here it was again divided, and the sound extremity secured like the former. The mesenteric vessels, which were very numerous, as may be inferred, were closed by torsion and by ice until all hæmorrhage had ceased. This was the most protracted part of the operation, but when accomplished the hernia knife was brought to bear on the ring, and this was freely enlarged. Making sure that the bleeding did not recur on the removal of the pressure maintained by the ring, the parts were now returned within the abdomen, leaving the two divided ends of the intestine protruding from the abdomen and lying side by side, where they were secured to the integumental margin in such a manner as to form an artificial anus. The day following the operation the pulse rose to a hundred and twenty, and there was some disposition to singultus, but the cathartics, which had been freely administered by my predecessor in the case, were being poured out freely at the artificial anus, and in two days the irritation had begun to subside, and from that time the digestive functions became tolerably well established. An examination of the intestine removed proved it to be of the jejunum, and to measure four feet ten inches. As soon as I could feel some assurance of the patient surviving the first operation, I began to prepare for the second, viz., the cure of the artificial anus. There was not wanting those in the profession who wisely shook their heads and thought this operation should have been deferred for several months to enable the patient to gain strength, etc., and influences were brought to bear upon the patient to that end ; but the patient seemed willing to rest her case in my hands, and so soon as my instrument maker could prepare the instrument from drawings I furnished him, I was ready to proceed. A few days' delay was asked by the patient's husband on account of business, and then, on July 31st, a clamp was introduced, the blades of which were oval, three-fourths of an inch wide, and one and one-fourth inches long, and fenestrated, leaving serrated jaws one-eighth of an inch wide. One blade was passed into each end of the intestine until fully within the abdomen. Great care was exercised that only the intervening walls of these intestines should be embraced by

the clamp, and the blades were then approximated by a set screw in the handles until slight pain was occasioned. Instructions were given that if nausea and vomiting occurred the clamp should be loosened, otherwise it should be very gradually tightened during the next two days. On the third day, the presumption being that adhesive inflammation had united the two intestines, firm pressure was applied by the clamp that the parts embraced might be caused to slough, and a free incision was made from one intestine to the other through the fenestral opening in the clamp. On the fourth day the clamp was gradually loosened and removed, and from that time the fœcal matter passed freely into the lower bowels and regular evacuations occurred by the rectum. A digital exploration revealed the smooth, rounded edges of the opening made by the clamp, and it now only remained to close the integumental opening, which was done by deeply set quill sutures on the 8th day of August, and the patient departed for her home in the central part of the State, leaving my cabinet enriched by a pathological specimen which is as highly valued as it is rare. It is no less amazing than gratifying to witness the happy effects of Homœopathic remedies in controlling the constitutional disturbances consequent upon grave surgical operations, and seldom have these been more happy in my hands than in the present case, where Aconite and Arsenicum played so important a part in controlling peritonitis and enteritis.—Yours, truly (signed), G. D. Beebe."

This remarkable operation, the ingenuity of making the anastomosis and its results, which were published in the *New England Medical Gazette* and the *United States Medical and Surgical Journal*, aroused the sententious spirit of many Old-School periodicals, and the *Boston Medical and Surgical Journal*,* in a sneering editorial, stated: "We are informed the patient died four days after the operation. Whether the heart was or was not flabby or fatty, we have not heard." I merely insert this opinion of the *Boston Medical and Surgical Journal*, not because it is of the slightest importance, but that we of to-day may understand the bigotry of the Old School twenty-five or thirty years ago.†

I may mention here that Dr. Beebe was appointed brigade surgeon by President Lincoln, and was on duty under Gen. Halleck

* March 17, 1870.

† *Western Homœopathic Observer*, vol. vii., p. 162.

and Gen. Grant, and was enthusiastic in his idea of the outdoor treatment of the wounded. Speaking of the War of the Rebellion brings to my mind the name of another of our surgeons who was very prominent during those times of bloodshed and disruption, no doubt the most distinguished of our military surgeons. I mean Dr. E. C. Franklin, who was born in 1822, became a private pupil of Dr. Valentine Mott, and was graduated from the medical department of the University of New York in 1846. During his Allopathic career he was made deputy health officer of California, and was given charge of the Marine Hospital at San Francisco. In 1857 he began the practice of Homœopathy, and in 1860 came to St. Louis, where I was his fellow-laborer for many years. It was through my own instrumentality that he was made Demonstrator of anatomy in the Homœopathic Medical College of Missouri. Dr. Franklin's career in the army was remarkable. At the breaking out of the war he was appointed surgeon to the Fifth Regiment of Missouri Volunteers, and shortly after was made surgeon-in-chief to the first regularly organized military hospital west of the Mississippi River. He soon was created brigade surgeon, and organized the United States General Hospital at Mound City, Ill. After the reorganization of the Homœopathic Medical College of Missouri, in 1872, he received the appointment to the Chair of Surgery in that institution. Finally he was called to the Professorship of Surgery in the Homœopathic Department of the University of Michigan, but he returned to St. Louis before his death. Dr. Franklin was an author of the *Science and Art of Surgery*, which embraced two editions, the first published in 1867, the second in 1873. Dr. Franklin and myself were rivals in the surgical field at St. Louis, Mo., and many a dispute we have had; but looking back, at this late date, to the contentions and discussions of those days, they seem so small, so little and so insignificant that they sink out of sight, and serve only as lessons to teach us how, in our selfish egotism, we are apt to magnify trifles connected with our own dear selves, which time soon effaces, leaving only the absolute wonder that such minutiæ could in any manner weigh against the truer and better and more enduring efforts of our life's work. During this period our much-lamented Liebold was also surgeon, and performed many linear resections and amputations, which are duly recorded in the *Medical and Surgical History of the War of the Rebellion.* During this period there was

in the navy of the United States a man who did good service. This was Dr. L. H. Willard, now one of the surgical staff of the wonderful Homœopathic Medical and Surgical Hospital of Pittsburgh. He entered the navy, and did good service in 1865, was active in his duties on board both the Ottawa and the Mohawk, and was captured by the rebels. He edited the surgical department of my periodical up to 1870, when it was discontinued.

Dr. H. F. Biggar, of Cleveland, in 1866, devised the Penostead flap in amputations and reamputations, and of this he says: "This operation, while original with myself, may have been adopted by others previous to 1866."*

Before I pass to the second division of my subject I desire to place upon record a case of brain surgery. I do this because, since cerebral localization has become such an interesting topic, the surgery of the brain has made such rapid strides that few are aware that, without this knowledge, one of our own men in the West was successful in removing a neoplasm from behind the orbit before 1870. This case was operated upon by Dr. N. Schneider at the hospital and before the class of the Homœopathic Medical College at Cleveland, Ohio, and has never been recorded. Dr. Schneider thus writes:† "I entered within the cranial cavity, removing what was probably angioma. It pressed upon the brain in such a manner and direction as to produce functional disturbances of sight and hearing on the right side, together with severe neuralgic pains and spasms of the muscles, terminating in epilepsy. I will not detail the symptoms leading to the diagnosis, but they were sufficient to induce the belief that there was a growth behind the right eye. I entered the cranium through the orbit, and found a tumor the size of a hickory-nut and attached to the dura. After a bloody and exhaustive operation I took it away. The patient recovered from the operation rapidly. By the tenth day he was sitting up; in two weeks he was walking about, and in six weeks was about the streets, free from pain and gaining strength steadily. About the 1st of April, upon getting up at night, he stumbled and fell, striking the occiput against the lock of the door, which produced, first, concussion, then meningitis, which was followed by death. Although the end was fatal, I never attributed it to the operation,

* Personal letter from Dr. Biggar.

† Personal letter from Dr. Schneider.

and have always looked upon the case as a success." Such, then, is another record of skill, which it gives me pleasure to record in its proper place to-day.

In mentioning these items in regard to the early surgery of our school, necessarily many omissions have been made. I have endeavored to give an outline of facts up to about 1870, twenty-three years ago. Since then, as I have already mentioned, our surgeons' names and our surgeons' work are matters of history. Were I to begin from that date, the distinguished President of the Institute, Dr. J. H. McClelland, whose labors as a surgeon and a health officer are known both in this country and Europe, would head the list, and be followed by a list of names of which this Institute is proud.

I desire now to inquire how came about the proverb, "There is no surgery in the Homœopathic School." In those earlier times, even within my own recollection, the professors of the Homœopathic faith abjured surgery and thus unwittingly laid the foundation for that opprobrium, the shadow of which continues in many sections of the country to-day. "No surgery; no surgeons among the Homœopathists." This was a logical sequence and should not be found fault with. The majority,—in fact, I may say all the men who first espoused the cause of Hahnemann were Old-School physicians (not surgeons, mark you). They were graduates of Allopathic colleges and had espoused the practice of medicine as their department. They had no especial taste (perhaps even a distaste) for surgery in the Old School. Why should they be expected to adopt it in the new? When the beneficent light of a specific law of cure began to illuminate the dark places of older and more uncertain methods, is it a wonder that these thoughtful men became more and more impressed with its reliability in the treatment of disease? Is it a wonder that they met together by day and by night, whenever opportunity offered, to exchange experiences, to verify symptoms, to declare clinical results, to prove new medicines, to discuss potencies, and all other subjects relative to Homœopathy? Is it a wonder when they were ostracised by the Old School, forsaken by their former friends, denied the rights of medical societies, refused consultations with those graduated in the same university and were branded as knaves, and quacks and fools, that they more closely bound themselves together and worked with redoubled energy to prove the truth of that law, for the adoption of which they were content to bear such miserable

persecution? What did such men, with minds so involved, care for the setting of a broken bone or the extirpation of a growing tumor? What was the mechanical treatment of any accident, or the performance of any surgical operation compared with the verification of a law destined to revolutionize therapeutics. "Procul est profani" was their cry. Surgery at this time, as they understood it, was a secondary consideration. The outside, or collateral branches of medical science, the disciples of Hahnemann regarded with a cynicism which would be ludicrous in these days. It was the Materia Medica Pura they studied; it was Homœopathic therapeutics pure and simple that they honored; it was the recognition and propagation of the law of cure for which they fought. Well is it for us to-day that these zealous and courageous men *did* so devote their lives to the establishment of truth. They placed the star of Homœopathy on high and it lights this century to-day. The enlightened professional men and women of all schools acknowledge "Similia Similibus Curantur" as a law of cure; and the crude medication of fifty years ago has given place to a new posology. But "mark you now what follows." As the years passed swiftly by and Homœopathy became more widely disseminated, and the pioneers were "passing to the other side" a serious question arose: What was to be done for those who desired to study medicine and who believed in the Homœopathic law? No Allopathic college would receive such men, no Homœopathic preceptorship would be recognized; no compromise would be allowed. But one course remained, viz., the establishment of Homœopathic colleges. The believers in the system in those days were all educated men, graduated in acceptable universities at home and abroad. They loved knowledge as well as they loved truth. They believed in thorough medical training and so it came to pass that when the first colleges were established, surgery was an important branch of medical science; necessarily it was embraced in the curriculum of study. I have watched its growth, watched it with a jealous eye for over forty years, and while I see around me in all the great cities, men brilliant and enthusiastic who are working with all their energy toward the establishment of surgical science, it seems to me that sometimes the shadow of the old opprobium hovers over us still. I feel that the great professors of Homœopathy in their excess of zeal for Hahnemann's law exhibit a careless disregard of surgery as a powerful auxillary in securing honor, position and place for Homœo-

pathy, which is to me surprising. The surgery of to-day stands pre-eminently foremost among the sciences and arts, which with all their magnificence adorn the latter end of this nineteenth century. It absorbs the science of asepsis, which holds in its hands the theory of germs. It embraces in its intelligent practice the microscopic appearances of every tissue, normal, abnormal or extraneous, in the human body. It brings within its sphere of usefulness, many of the instruments of precision; the newer chemistry is its hand-maiden, and bacteriology its invaluable assistant; and (speaking now from a purely artistic standpoint) it is my opinion that the world cannot show in any department of art, any more unrivaled workmanship than that exhibited by the surgeons, and especially the American surgeons of to-day. The question regarding artistic and ideal surgery is *not* "What can it do?" but "What can it *not* do?" The world respects it, legislative bodies appreciate its worth to the communities they govern, and the people applaud it as the most progressive of all the collateral branches of medical science; and I make the assertion here, that after a tolerably wide experience, until the value of surgery as a means of the propagation of the interests of our own school is fully acknowledged by *our own men*, we can never obtain equal governmental and civil appointments with the Old School. Private practice may increase, but public recognition will remain in abeyance. I state further that it is only since our own surgery has been in a measure acknowledged, that a few public hospitals have been open to us. Great institutions will never be entrusted to our care, until those controlling them are satisfied that injuries can be cared for and all operations properly performed. The Homœopathists will never receive appointments in the army and navy until sufficient proficiency in surgery is acknowledged. It is to these facts that I desire to call the attention of this Congress. There is something more to be studied in the Homœopathic School than Materia Medica and Therapeutics. There are other branches of medical science to be considered by our great national and state organizations, for Homœopathy can be carried into everything; into Surgery, into Obstetrics, into Pædology; and the surgeon who amputates a limb, and prescribes homœopathically for the pain, or sets a fracture and prescribes Calc. phosphor. to assist in the formation of callus, or administers Silicea for a felon, or Hamamelis for hæmorrhage, or Conium for cancer, must hold at least as high a rank among upholders of the system of

Hahnemann as the symptomatologist, the Materia Medica man or the therapeutist.

This appeal I now make to those of my school whose feelings and inclinations prompt them to investigate only those branches of medical science with which Homœopathy is most closely allied, viz., Materia Medica and Therapeutics. I beg them to consider the importance of surgery, properly taught and properly practiced, as a factor in the wider dissemination of Homœopathy. You must pardon this apparent importunity on my part, gentlemen. It is not that I desire to be litigious that I mention these matters here, but the generation to which I belong has topped the hill and it is facing the decline. As time speeds onward, never stopping, never waiting, I see my oldest friends in the service of surgery have well-nigh gone the way of all mortality. Even since the appointment of this lectureship, one of the foremost of our surgeons,* and one whom I have known and loved since I was a boy, to whom I lectured (although almost his own age), one who stood foremost in the ranks, a man of sound judgment, a fearless operator, and a generous friend, and on whose diploma my signature is written, has passed into the light of God's day; and, as I recognize these things, the gladness of victory, the impatience of achievement, the fierceness of strife, are not what they once were; and I say this to you, with the increasing light of experience and observation, that a full knowledge of the collateral sciences, among which surgery stands pre-eminently foremost at this day, is the only stepping-stone to the successful recognition of the Homœopathic school, the bulwark wherewith to protect it "from all assaults of the enemy," the tutelary gods to shield it from disgrace, the potent power wherewith to place it on equal footing with the older and traditional school. In other words, we want more erudition in the collateral sciences (in which surgery stands pre-eminent), and less thrasonical talk concerning Homœopathic cures, which, indeed, if we will let them alone, will talk for themselves. We want more general and specific knowledge, and we want, O, how we want! the wisdom to know how to use it.

"Knowledge and wisdom, far from being one,
Have ofttimes no connection. Knowledge dwells
In heads replete with thoughts of other men,
Wisdom in minds attentive to their own.
Knowledge is but a rude and shapeless mass,

* Dr. George A. Hall.

The mere material with which wisdom builds,
Till formed and squared and fitted in its place,
Doth but encumber him it seems t'enrich.
Knowledge is *proud* that it has learned so much,
Wisdom is *humble* that it knows no more."

Discussion.

The Chairman: I will call upon Dr. I. T. Talbot, of Boston, to discuss this paper of Dr. Helmuth's.

Dr. Talbot: *Mr. President, Ladies and Gentlemen:* I feel myself utterly inadequate to say anything which can add to the value of this address. It is a *résumé* of the progress of our School in this one subject. I may, perhaps, give one or two points which have not been included in this paper; and first, let me speak of the first chairman—for such he was called at the time—of the American Institute of Homœopathy. I refer to Dr. Flagg, of Boston—a Homœopath who was so well acquainted with the subject, and who loved it to the last day of his life, and had such implicit confidence in it. He stood at that time the very first one to raise to a science and an art the whole subject of dentistry. He was, at the time, a progressive, leading man, and did much for it, and yet he was the first chairman of the American Institute of Homœopathy.

The consideration of the position of surgery during the early years of the American Institute, which was organized less than twenty years after the entrance of Gramm into this country, found a large number of Homœopathic physicians who, in their earnestness for what Homœopathy was to do—in their great belief in the efficacy of the globule—felt that surgery was a thing of the past; that it would be no longer needed; and it threw a chill upon those who felt that surgery was yet to be cultivated among Homœopathic physicians. There was still another point. When Homœopathy began to achieve its first popularity, there unfortunately came a class of men who took the box and book, and felt that knowledge and science were entirely unnecessary in Homœopathic prescribing, and they did'nt dare to use the knife; they had no knowledge of surgery, and therefore decried all surgical procedures. Now, it was at this time that the first Homœopathic college was established, in Philadelphia, as Dr. Helmuth has told us; and there were no men, in the twenty-three years that had followed the introduction of Homœopathy, competent, as Dr. Helmuth afterwards became, to be its instructor; and he has well said, that in the three years that he was there, but three or four operations were performed. I was a class-mate of Dr. Helmuth, and we at that time deprecated the condition of affairs in the school as related to surgery. We felt the necessity of it; we urged upon the Faculty at Philadelphia to erect a hospital, that surgery might

be properly taught and practiced; but it took a good many years for that to be done. And thanks to the efforts that have since followed in Philadelphia, in that college where we and they saw in a year but a single surgical operation, and that a slight one, we have now a hospital which is a credit to our school and an honor to that institution. We have one of the best hospitals in the United States, where the operations are not by ones and twos, by dozens and scores even, but by hundreds—the most severe and difficult operations, with the most brilliant success. The same is true in all the Homœopathic colleges of the United States.

It is for us, ladies and gentlemen, as a body of physicians with a belief in Homœopathy, that it shall advance in medical science—it is for us to set our standard to the very highest point attainable. It is, that surgery shall be taught and practiced in the very best manner. It is, that all the sciences which go to make up the great advancing science of medicine, and all the knowledge which goes to make the physician, shall be taught in all our colleges in the best and most thorough manner. It is for you, ladies and gentlemen, it is for you, physicians of this country, holding to this belief, to put your hands to the work and your shoulders to the wheel, to help these colleges in their efforts for the advancement of surgery, and of all the sciences that underlie the successful practice of the noble art of Medicine.

THE CHAIRMAN: I will now call upon J. H. McClelland, M.D., of Pittsburgh, Pa., for further discussion.

DR. MCCLELLAND, President of the American Institute of Homœopathy: *Mr. Chairman and Members of the Congress:* As remarked by my distinguished friend, Dr. Talbot, I don't see what I can add to what has been said by Dr. Helmuth. He, you know, is our *particeps princeps.* He is first, and deserves to be. I really had not thought of speaking about this address of Dr. Helmuth's because I had but heard it; had no copy of it and, of course, knew nothing at all of its contents until I heard it read this morning. I was, I believe, to discuss a paper that was to be presented by Dr. Helmuth in the Surgical Section. I will add a word, however, in the same line as that taken by Dr. Talbot, and that is, that though the surgery of early Homœopathy was very small indeed, I think we may justly say that the surgery of to day in the Homœopathic School compares with that of any school or of any class. We have with us here men who have added lustre to surgical science, who have done credit to the Homœopathic School; and they are not here and there merely, as single workers in this important field, but you find them in every city and almost every hamlet of this great country, and the number is increasing. You find a surgeon here and a surgeon there on every hand, and they are doing excellent work. Now to say that the results are very much assisted and bettered by the

therapeutic element of the case, I think, goes without saying. There is no doubt that the Homœopathic surgeon receives very great assistance from Homœopathic therapeutics. I believe that is the experience of every one.

As a bit of personal knowledge I would say that I very well remember the beginning of small things in our own city. It is, I think, some twenty-five years ago that the first capital operation was performed in the Homœopathic hospital of Pittsburgh, then in its first year. I had the honor of doing that capital operation, and it was counted in those days among us as a great one. It was the amputation of a leg. Well, of course the amputation of a leg ought to be done right, at any time, but that, you know, is a very simple affair now, and goes among the minor operations. As compared with that, our hospital now of 200 beds, which this last year has received $60,000 from the legislature for maintenance, is doing very much larger work. I think we have in the neighborhood of some two or three hundred capital operations in a year. Only this last year, for instance, we included, among others, three double amputations and subjects that were very badly shocked and injured as well, and they all recovered. We had in one week three vaginal hysterectomies, which all recovered, and a fourth was added which recovered. We added one to the operation of Cæsarian section wherein the mother and child both lived; and so I might go on to compare the day of small things with our standing to-day, and the experience I give in our own institution is repeated here and there all over this great country. I will be very glad indeed if we can hear from such veteran surgeons as Dr. Ludlam, who has added great lustre to our school in the line of surgery; and there are others who, I think, could address you to much bettter advantage than I.

THE CHAIRMAN: The subject is now open for general discussion. Those who speak are limited to five minutes.

R. LUDLAM, M.D., of Chicago: *Mr. Chairman, Ladies and Gentlemen*: I don't know what I can say in five minutes that would entertain you, but I may venture to give my approval of what has been said in the address and in the discussion thus far. This is one of the times I long have sought and mourned because I found it not. I have felt for many years that the surgical branch of our work did not receive a due share of attention at the hands of physicians of the Homœopathic School, and that this specialty needs more consideration in the organization of our colleges and in our work. This subject has received great emphasis to-day. I believe it will do us great good. We need to be armed at all points in the practice of our profession, and to have gone the whole round of the medical compass. I cannot perceive how perfect knowledge of one branch of the healing art shall make us weak and worthless and willowy

in another. I never could conceive why a man who was a good surgeon in our school should be any the less a good Homœopathic physician. A man—it has been proved of late years—may be a sound physician—a Homœopath—and yet not be a fool at the same time. He may be, I think, a good surgeon and a good Homœopathist, a good obstetrician and a good gynæcologist. The long and short of it is, my prophecy I believe is coming true, and if I shall live, as Moses did, to see the promised land, I shall be delighted. I spoke of Moses yesterday; Moses is an old friend of mine. He made some mistakes, I am told, but he was a good fellow. This is my point: We are cultivating specialties now and it always seems as if they were fads. They are not fads necessarily. If we keep on with the development of specialties that are germane to medicine, bye and bye the fashion will change; bye and bye the Old School will come to our camp to learn therapeutics as a specialty. They have almost abandoned the study of therapeutics. They give anything now-days in the most off-hand way. They are doing absolutely nothing with therapeutics. Wait a bit until these specialties have been developed to their utmost and somebody has got to take hold of therapeutics and develop that as a specialty, and then they will come to somebody who knows something about it to start with.

The Chairman: The next business in order will be the paper by Richard Hughes, M.D., of Brighton, England, and in his absence it will be read by O. S. Runnels, M.D., of Indianapolis. We have with us E. Vernon, M.D., of Toronto, President of the Canadian Institute, at Hamilton, who I will ask to take the chair during the reading of Dr. Hughes's paper.

ADDRESS.

THE FURTHER IMPROVEMENT OF OUR MATERIA MEDICA.

By Richard Hughes, M.D., Brighton, England.

I have been asked to speak to you on this occasion regarding the "Further Improvement of our Materia Medica." The term "further" implies that some improvement has already taken place, from which, as a resting-point we may note progress and survey the ground yet beyond us. The reference is obviously to the *Cyclopædia of Drug Pathogenesy*, and upon this I would say a few words at the outset.

The work in question consists—as you know—of a collection of the provings of drugs not contained in Hahnemann's own volumes, with a selection from cases of poisoning by them and of experiments made with them upon the lower animals. These provings, poisonings and experiments have been carefully translated or transcribed from their originals, and are presented in the primary narratives wherever these are given. The provings themselves are a selection, made upon rules approved by the two National Societies of America and England, and so framed as to exclude—as far as it is possible—all dubious matter. We thus have, in the four volumes of the *Cyclopædia*, pathogeneses of as many hundred medicines,* as trustworthy as careful choice can insure, and as correct as knowledge and painstaking care can make them, with the additional advantage that, wherever practicable, they are presented in an intelligible and interesting form.

The result gained by the completion of this work is that the lamentations over the unsatisfactory state of our Materia Medica, which for the last forty or more years have been heard from all parts of the Homœopathic world, may now sink to silence, or rather be

* The exact number is 413.

exchanged for gratulation. They were well warranted when Jahr's *Manual,* in its various forms, was our sole collection of pathogenesy. Symptomatology was there presented in a form most incredible, unintelligible and repulsive, without ground for its statements or clue to its mazes: it was, as it has been called, "nonsense made difficult." Nor were the groans evoked by it altogether assuaged by the appearance of the *Encyclopædia* of Dr. Allen, great advance though this was. Our scattered provings were there, indeed, brought together and referred to their authors, besides being much enriched from general medical literature; but they remained unsifted, and were all broken up into the categories of the Hahnemannian schema. Our Materia Medica, even in "Allen," continued to be dubious and unattractive. Now it is neither. The student can read the narratives of proving, poisoning and experiment contained in the *Cyclopædia of Drug Pathogenesy* with as much confidence and as lively interest as if they were cases of idiopathic disease; and the practitioner can, with firm reliance, utilize them in his practice. If doubtful matter still remains, as where, with little or no information as to their origin, we merely have a list of symptoms, the statements made as to their character, and (generally) the inferior type in which they are presented, will suffice to warn off from possible quicksands or quagmires.

But I must not leave the *Cyclopædia* without a word as to the pathogeneses given us by Hahnemann himself, to which it contents itself with referring, evidently implying that they also should be possessed by the reader. Those of the *Chronic Diseases,* indeed, are still a sealed book to most from the lack of an adequate and accessible version. The *Materia Medica Pura,* however, has been now retranslated for us by the competent hand of Dr. Dudgeon, and can be obtained by any one. There may be read the results of the master's primal essays at drug-proving, with his own illuminative introductions and notes. The symptoms are arranged in schema-form, indeed, and there is little information as to how they were elicited; but the latter deficiency is supplied from other sources, and many of the individual symptoms are themselves groups which have association and sequence. When I speak of our Materia Medica as we English-speaking nations have it, it must be understood that I include these two volumes of Hahnemann's as well as the four of the *Cyclopædia* which supplement them.

And now, from the standpoint of what has been gained, let us inquire what remains to be done towards the improvement of this Materia Medica of ours. Let us clear the way by seeing what should *not* be done.

The first thing to be deprecated is the view that the narratives of the *Cyclopædia* constitute so much "raw material" only, and must be worked up into a schematic symptom list before they can be made available for practice. Why should this be? For readiness of reference, it is replied: when we want to know what spinal symptoms Cicuta induces, we can turn to them at once in Allen, but in the *Cyclopædia* we have to hunt them through a number of records. My answer is, that this need should be provided for by an index, as it is in other books. We do not, in these, cut up the text into categories that individual items may be the better discovered; nor should we do so here. Hahnemann unfortunately took this course with his own provings; and nothing, I think, has done more to rob him of his honor in the profession at large, to hinder conversion to Homœopathy, and to drive practitioners of the system into empiricism, than the distortion which has resulted. I maintain further that symptoms placed singly, divorced from their sequence and concomitants, often convey a false idea as to the pathogenetic action of drugs: so that the schema is not only unnecessary but misleading.* The abandonment of this mode of presenting our Materia Medica is one of the most important features of the *Cyclopædia;* and it would be no "further improvement" if we were to build again that which we had destroyed.

It is under the influence of these considerations that I do not feel as sympathetic as otherwise I should be towards another plan for reconstructing our Materia Medica—that advocated from Boston by Drs. Wesselhoeft and Sutherland, and taken up (with some modifications) by the Baltimore Investigation Club. It is mainly a trying of the symptoms of our pathogeneses by the test of their recurrence in more than one subject of the drug's influence—only those which stand the ordeal being retained. I am not quite sure about the soundness of the method; there must be some flaw in a mode of proceeding which leads to the rejection of Cactus as inert, and to the

* These theses are defended in detail in a paper on "The Presentation of the Materia Medica," read by me at the International Homœopathic Congress of 1886, and published in its TRANSACTIONS, p. 121.

reduction of the symptom-list of Gelsemium (upon one proposed method) to four items only.* The principle, however, is excellent; it is that upon which I am to a large extent acting in making the index to the *Cyclopædia*. I am referring only to such apparent effects of drugs as "by the force of their occurrence or the constancy of their recurrence witness to organic connection with their assumed causes."† But suppose I were to write down these symptoms as I indexed them, and, casting them into the categories of a schema, were to publish them as the tried residuum of our symptomatology. Genuine they might be; but a Materia Medica so constituted would retain all the remaining faults of those of old; it would be as unintelligible, as repellent, as misleading as these were.

One of our journals, in noticing the *Cyclopædia*, says that "it totally ignores a host of old Homœopathic landmarks." By this is probably meant the "clinical symptoms" which swell the bulk of so many of our Materia Medicas—meaning by this term morbid states which have (not appeared, but) *dis*appeared while their subjects were taking certain medicines. Hahnemann made some, though sparing, use of such symptoms only, however, when they occurred in provers of drugs,‡ and always noting that they were *Heilwirkungen*. Jahr introduced them more freely, *0* indicated their character by affixing a small circle (o) to each. So far little harm, if little good, was done. More recently, however, the practice has grown up of mixing pathogenetic and clinical symptoms, together with guesses, therapeutic suggestions, and hypothetical inferences, in one indiscriminate mass, and calling this conglomerate the Homœopathic Materia Medica. Men imagine that they are applying the law of similars when they work with such books, whereas they are very often practicing the merest empiricism.

I do not wish, on the present occasion, to go further into detail on this subject. I have often expressed myself upon it and always feelingly; for I deplore the procedure in question as one of the

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* See *New England Medical Gazette* for December, 1888, and *North Amer. Journ. of Hom.* for June, 1889.

† See "The Index to the Cyclopædia" in the *Monthly Hom. Review* for November, 1890.

† The symptom-list of Iodium in the *Chronic Diseases* is the sole exception to this statement.

greatest calamities that has ever befallen us. My sole reason, however, for mentioning it now is to support the opposition I would make to any vitiation of our symptomatology with matter of a clinical kind. It is not that I undervalue the *usus in morbis* or despise therapeutic suggestions; but I would have these kept separate from the pure pathogenesy. They may appear in prefaces and notes, as in Hahnemann's publications; or they may occupy a separate volume, as must be in our case. There they find scope for abundant usefulness; but mixed up with the results of provings and poisonings they are confusing, illusory, and destructive of all scientific thought and practice.

Not therefore by schematizing, by reducing in number, or by blending with clinical materials, the drug-effects on the healthy we have brought together, do I conceive that the Materia Medica of Homœopathy will receive further improvement. In fact, I am of the same mind now as I was in 1879, when reviewing attempts at reconstruction by Drs. Jousset and Espanet.* I deprecated any attempt to substitute such studies of drugs for our existing symptomatology. "Let this," I wrote, "stand as it is,† and let our work upon it be something like that of theologians upon their sacred books. As with them, let our best endeavors be made to enrich, to purify, and to illuminate the text. Then let those competent for the task give us commentaries upon it, elucidating its language. Let the teachers of Materia Medica in our schools publish from time to time their systematic lectures, embodying (as these must do) all the sidelights which from toxicology, from the physiological laboratory, and from therapeutic experience they can bring to bear upon its study. These will answer to treatises on doctrinal and practical theology; and then, for the sermons which expound and apply particular texts, let us have clinical records showing the bearing of pathogenetic symptoms upon the phenomena of disease. In this way, while we shall lose no grain of fact which can be made available in the comparison of drug-action with morbid conditions, there will be supplied to every student of the Materia Medica a general knowledge of its constituents, of their sphere and kind of action, of their

* See *British Journal of Homœopathy*, xxxvii., 257.

† Of course, neither there nor here am I minimizing the need of fresh provings. But on this score I spoke so fully at the International Homœopathic Congress of 1891, that it is needless to repeat myself on the present occasion.

characteristic features and ascertained effectiveness, which shall send him forth fully equipped for using them in the treatment of disease. There is thus abundance of work for all who desire to labor in the field of Materia Medica, and the more there is done of the kind the better for the future practitioners of our method."

Now that, in the *Cyclopædia*, the text of our Materia Medica *has* been enriched, purified and illuminated, I the more earnestly urge its being left alone, and no attempt being made to substitute for it the result of any extractive or other process. The rest of the work suggested remains open; as it is adequately performed, the further improvement desiderated will accrue. I would especially call for commentaries, elucidative and exegetical; and would suggest that those most competent for such a task are the specialists of our school —the neurologists, the oculists, the aurists, the gynæcologists. To the study by such men of the symptomatology of disease, aided by post-mortem examination and experiments on animals, we owe the great advances in pathology which have marked the last sixty years. May not similar investigation, when directed to pharmacology, achieve like results? The phenomena of drug-disease have also their meaning, and lend themselves to patient interpretation. They are not themselves to be forgotten, and the phrase which explains them substituted, any more than the clinical features of idiopathic disease are to be merged in its nosological name. But the explanation illumines them, makes them coherent, intelligible, memorable; they become part of our mental furniture, and are not mere strings of symptoms to be learned by heart. A series of studies, by experts in each department, of the neurotic phenomena of the oxalic and picric acids, of Agaricus, Bisulphide of carbon, Hypericum, Lathyrus, Osmium, Phosphorus, Physostigma, Secale, Zinc.; of the eye-symptoms of Ammoniacum, Aurum, Digitalis, Euphrasia, Macrotin, Naphthaline, Ruta, Santonine and Spigelia; the tinnitus of Quinine, the Salicylica, Coca and Chenopodium; and the pelvic disorder occasioned by Ferrum, Lilium, Murex, Sabina and Xanthoxylum— a series of such studies, I say, would enrich the very life-blood of our practice, and make us all better fitted to deal with the morbid states that come daily before us.

Discussion.

The Chairman: Before the discussion of this paper I would like to announce that the section of surgery will meet in this room

at 3 o'clock this afternoon under the charge of Dr. John E. James, temporary chairman. I would also give notice on behalf of the World's Congress Auxiliary that it desires all members in attendance upon the Congress to register in the basement at the official registry. This is distinct, ladies and gentlemen, from your registration in Room 2 under the auspices of the Congress and the American Institute of Homœopathy.

The discussion on Dr. Hughes's paper will be opened by Dr. J. P. Dake, of Nashville, Tennessee.

Dr. Dake: *Ladies and Gentlemen:* It seems hardly necessary for me to say anything upon this paper of Dr. Hughes. Dr. Hughes and I have been associated in work for several years and we quite agree in our views. However, there are some points in which I must place a little dissent from the address. While I agree with him fully that the proper publication of all provings should be in the narrative form just as the symptoms have occurred from the first day or the first hour until the last; still, for the convenience of the profession and the busy practitioner, I hold that it is necessary to have some sort of minor arrangement or, as Dr. Hughes calls it, extractive work applied. I must confess that my use of the Materia Medica, as we have had it in its schematic form, has been useful to me, and I may not agree as yet to cast it aside. Of course, the cutting up of symptoms by an arrangement, as we have had from Hahnemann down, does separate them and take them out of their connection, but the physician, while using the schematic form to find what he is after, ought, in my judgment, to refer constantly to the original record, and particularly when he has a case that requires much study of remedies. There you have it in those connections, and we must look upon the effects of drugs as drug diseases. Belladonna produces a Belladonna disease, and we ought to take it in its entirety as we do a case for which we are prescribing.

I cannot entirely agree, therefore, with Dr. Hughes in what he says in regard to the work in Boston by Drs. Wesselhoeft and Sutherland, and in what he says with regard to the work being done in Baltimore by the Investigation Club.

I have had in years past a little controversy with some of my English friends in regard to this matter. I hold that when the symptomatology of a drug is properly taken and properly studied that it is possible, by a study of those records, to know something of what are the characteristic symptoms of the drug. I hold that there is no other way safely to determine what are the characteristic symptoms of a drug. To depend upon clinical experience will not do. We have been misled often by such attempts. I once made this point, in answer to some of my English friends, that while we may have a map of the United States in detail, giving every river and every county line, and the location of every city, and perhaps of

every village, still it should be possible to give an outline map of the United States that will not be misleading, even if it does not give us all the information that we may desire.

For that reason I hold that it is possible, when provings are rightly made and rightly recorded, to have an abstract of Materia Medica that will comprise the characteristic or more prominent and persistent symptoms of each drug.

I will not detain you, but wish to make this remark, that the future improvement of the Materia Medica depends not so much upon the arrangement of the material we now have as upon the production of better material. The provings should be made with all the care, and recorded with all the care, that you may see in any other department of science. This is a matter of experiment. Experiments ought to be performed with every precaution that is possible, against illusion, against error and corruption.

It is a fact, that I may have occasion to mention again before we get through with our Congress, that provings have been made here and there and everywhere by busy physicians, by people who are full of theoretical ideas and of pathological notions, that make their appearance in their provings. Provings have been made by persons who are not even acquainted with anatomy, so as to be able to locate their symptoms in attempting to describe them. These are faults which must be remedied, and to do that we will have to have this matter conducted by persons competent to supervise it, by provers who are in the right conditions to have the effects of the drug reflected properly, and to have all the symptoms recorded in a plain and proper manner.

THE CHAIRMAN: The paper by Dr. Hughes will be further discussed by Dr. T. F. Allen, of New York City.

Dr. ALLEN said: *Ladies and Gentlemen:* I have listened with the greatest interest to the reading of Dr. Hughes's paper, but confess my disappointment that in it he alludes to the *Cyclopædia of Drug Pathogenesy*, or the improved Materia Medica, standing as it is, as the sacred books of the Bible.

At the meeting in Deer Park I, a minority of one, protested against the doctrine and the principles upon which this new Materia Medica was based. I have not since that time changed my opinion; and the Materia Medica as incorporated in the *Cyclopædia of Drug Pathogenesy* cannot stand, in my opinion, as the sacred books of the Bible. I do not now, and never have, believed in the method of arrangement as practical and adapted to the wants and necessities of the homœopathic physician. In that respect I differ from Dr. Hughes when he says that he regrets that Hahnemann saw fit to put his *Materia Medica* into the schematic form, and perhaps that, therefore, Homœopathy suffered. I believe, as an humble follower of Hahnemann, that he did the best thing for Homœopathy, and that

if he had not put his *Materia Medica* into this schematic form it would have almost died in its birth.

I differ now, have always and must always differ, from Dr. Hughes on this point. I cannot conscientiously do otherwise as a teacher and practitioner of Homœopathy. The narrative form is extremely valuable for study. The narrative form of the *Cyclopædia* is a book I prize most highly. It is on the front shelf of my desk. I consult it constantly, but in prescribing for my patients I use the Schema, not the Narrative form. In studying for the preparation of lectures, for the working out of the points, the characteristic features of the action, and study of the, if I might almost coin a word, the Pathognomenia of the drug, I use the *Cyclopædia;* but Hahnemann wanted to make it practical, and that is, I think, what the Homœopathic profession of to-day needs. So Dr. Hughes's paper goes on principally at first to speak of the arrangement of the *Cyclopædia.*

Next he states that, in his opinion, the improvement of the Materia Medica will come not from the improvement of the Materia Medica, mind you, as he says, but from exigencies. That we must have lectures upon it; it must be eliminated; we must have talks and sermons upon this Materia Medica. But that is not an improvement in the Materia Medica itself, and, therefore, I wish to submit a few words on the subject-matter of Dr. Hughes's address, rather than on the address itself.

The improvement of the Materia Medica has taken hold of the minds, I am happy to see, of many of the younger men as well as the older men in the profession, and Materia Medica clubs have been formed in various parts of our country; the Boston Club, the Baltimore Club, the New York Materia Medica Club, all having for their object the study and improvement of the Materia Medica.

Dr. Dake has very properly, and in accordance with my own opinion, sounded the keynote of his approval of the course adopted by the Boston and Baltimore Clubs in conceiving the Materia Medica. I entered heartily into that work, and I believe it to be true, as Dr. Dake has just said to you, that the characteristic symptoms of our Materia Medica will be found in the provings. Yes, but only when the provings of a drug shall have been completed, as he himself modified his statement. There is not more than one or two drugs, perhaps, in the whole Materia Medica which have been completely proved. I would, perhaps, mention Lycopodium as one approximately complete. Most all of the drugs of our Materia Medica are extremely incomplete, and on this ground I base my objection to the improvement of the *Cyclopædia*, because it threw out isolated provings.

Now, many of the most valuable symptoms to me for my use in practice have been derived from my study of isolated cases of poi-

soning or isolated provings. A single proving, a single case of poisoning has given me most valuable indications. Symptoms for use at the bedside which I consider characteristic, and which I rely upon and must continue to rely upon. Those provings have not been duplicated. These observations, indeed, have not been duplicated. I cannot use the Materia Medica which leaves them out, and consequently my manuscript Materia Medica is a large and constantly accumulating one. I rely upon it. How, then, are we to know, except by symptoms, what to do with this enormous mass of Materia Medica? The making of a Materia Medica is really in its infancy; this proving of drugs is just commenced. As I said at the meeting at Atlantic City, we are laying the foundation, the ground-work for centuries of labor in proving drugs. It seems an almost infinite work, but until our proving is complete, so that we can prove a drug in every part of the body, upon every symptom, susceptible to its drug action, our work will not be complete and our Boston and Baltimore Clubs cannot group their symptoms. My own limited experience in proving teaches me that different conditions develop different symptoms. It is only when we have large masses of provers, over and over again, that we get the whole proof of the drug upon every part of the body susceptible to this drug action. It must necessarily be so; we cannot complete this work; it is in its infancy.

I want to say to you, and should have spoken of it sooner, that, in my opinion, the improvement of the Materia Medica must come about through its application at the bedside. Improvement in methods of provings? Yes. Improvement in the interpretation of symptoms? Yes.

When an observation comes to my hand, an isolated observation of the effect of a drug, and I test it, and the test is repeated at the bedside, it fixes its value in my estimation and must do so in yours. We cannot yet dispense, I will say, with clinical symptoms—I do not believe in them; but we cannot dispense with our experience obtained from the application of drug symptoms at the bedside. We all of us come to rely upon them. We all of us see more or less, perhaps, doubtful symptoms. We cannot depend entirely upon the book, because I may say that no drug is yet completely understood, and we do not know what may be developed in the future. The value of what has been verified repeatedly at the bedside cannot be overestimated. If a single observation of a single individual serves me well every time, I will hold to it as a good symptom, and my cure is Homœopathic. So I think the course taken in the New York Materia Medica Club (of which, I am sorry to say, I am a very poor member, having never attended a meeting) meets with my hearty approval. Their course is able to test the symptomatology of our Materia Medica; it is practiced at the bedside, in the dispen-

sary, in private practice, and week to week coming with "this symptom and that symptom cannot be verified at the bedside; but *this* symptom is always verified at the bedside." We make notes of these; we underline them in our books; we rely upon them because they have been repeatedly found to serve us well. Our improvement in Materia Medica lies largely, it seems to me, in the clinical application of it.

There is much more to say, but I will not detain you longer.

CONRAD WESSELHOEFT, M.D., of Boston, Mass.: I shall only detain you a few moments. I want to make a few brief allusions to Dr. Hughes in reference to myself. He has honored me by reference to my elimination or exclusion of Cactus, referring to the method which I have employed in coming to that conclusion. Perhaps I may be wrong, but what I want to discuss is the method by which it was done. He says there were flaws in the method, or else Cactus would not have been excluded. Likely there were flaws in the method. The method was simply that alluded to by Dr. Lane, Dr. Bates and others, of comparing the results of proving—making a careful comparison of provings. It is by comparison alone—a great number of comparisons—that any true results in science can be reached. The experiments were very painstaking and thorough. The reasons for which I threw some doubts upon the utility of Cactus was not only because comparisons of the provings gave that result, but because I also made personal provings upon it with the same result. I was willing to sacrifice my valuable person to so valuable a medicine and for the good of mankind. Not I alone, but a good many of our students in Boston, have reproved Cactus a good many times and very thoroughly since Dr. Ravenna, in Naples, first came out with his marvellous proving of Cactus. If there is error in my conclusions, very likely it is owing to the difficulty of the matter, but not owing to the principle upon which it was done. Why should not I exclude Cactus on careful examination, on careful proof, on careful reproof and careful comparison, when Dr. Hughes takes it upon himself to deal with Natrum muriaticum in the way he does without any proving or reproving or comparison at all? He gives no reasons why; he has not made any comparisons or provings with Natrum muriaticum as I have done. He has made no reproving. If Dr. Hughes is justified in throwing out a medicine on such reasons as those, I think I should be justified in throwing some doubts at least upon the utility of the proving. I have carefully compared and reproved, and spent not only days, but weeks, in doing so myself. Now, there may be a great deal of good in Cactus. I have in my possession a two-ounce bottle of tincture of Cactus, presented to me by my old friend in Brookline, who obtained it in Naples from Dr. Ravenna. He brought this to me, and was very anxious that I should prove it,

and I did so. I went carefully to work to make the provings, merely to show that I could get effects from it—from twenty to thirty, forty or fifty drops of that very powerful stimulant. Those of us who have proved it have done so not only with the potencies —first two, four and five tincture graduated doses—but have carried it to the ounce, and got no other results. I do not say that my provings are as good as Dr. Ravenna's. He gives no provings at all. He states facts, makes statements, and when you read them you would suppose a person who had taken Cactus had fallen with an attack of epilepsy, in which he rolled and writhed on the ground. Others, again, there are who think the person died of heart disease or suffocation or of violent cough or tremendous hæmorrhages, which, in reading, would appal even one accustomed to sights of horror. I say, from the proving of Cactus, at first thought, it might be hæmorrhage, heart disease, epilepsy—all these things they suppose I might be troubled with, but I got nothing of the kind. I said to Dr. Hughes: These are strong evidences of the value of the proving. It has been ascertained that Dr. Ravenna took certain quantities. Some friends found among his papers that he had taken the third attenuation to get these symptoms. That was a good many years after Ravenna was dead that somebody wrote that; but Dr. Hughes don't think such a statement is going to get into Materia Medica, that Dr. Ravenna, by means of the third attenuation, produced these results. I do not believe them; I do not want to impugn anybody's veracity, but I do not think they are correct. I merely suggest that Cactus, instead of being a medicine that would produce violent effects, was, on the other hand, an innocent potherb.

Dr. Hawkes: Just one word or two upon this point. You would look in vain through all the works on Materia Medica for my name, but if I cannot claim to be a writer I can claim to be a reader and a user. I wish in this connection and under this statement to offer one word of warning, and that is this: That it may be, and is, a very honorable thing to notice a medicine which has been well tried and well proven; but he incurs a very heavy responsibility who excludes from our Materia Medica certain medicines, because they have not been so fully used. There is one, Muritius Upia (?) that has served me in the very best possible way. I have learned to use it from just one word repertory, introduced by Drysdale. I refer to Allen's big book, and that contains a reference to Upia, and I followed that up, but now that drug is excluded from the *Hand Book*, which I use, by the way, alternately as a hand book and an Indian club. It is excluded also from other works, with reference to which we have heard this morning, but I wish to say a word, the symptom of a burning in the left ovary has proved to be of the very greatest value. My work, of which I must not speak now, has some connection with that part of the body. I would

not hesitate if occasion required it to open the abdomen, and if this were the proper place I could bring case after case before you that had been condemned for operation, and where operation—I am not saying now whether that was a virtue or not, but that operation has been saved. And amongst other things I would say that this drug, a description of which you will find in any of these Materia Medicas, but is fairly well and fully spoken of in the bigger work of Allen. I would say that this is a direct cause of evil; that one solitary instance which I, as a user of the drug, rather than a writer of Materia Medica, would speak of and mention as a word of warning to those who are perhaps a little too ready to cut out from our Materia Medica.

F. Parke Lewis, M.D., of Buffalo, New York, then addressed the Congress on the subject of "The Value of Specialties in Medicine."

ADDRESS.

THE VALUE OF SPECIALTIES IN MEDICINE.

By F. Parke Lewis, M.D., Buffalo, N. Y.

While we are gathered together from widely separated parts of the world in this fair city where so much that is of interest is now centered, I am not insensible to the honor you do me in pausing even for a few moments to listen to the thoughts I have to offer upon the general subject of "Specialties in Medicine." Though the occasion is not one to warrant us in entering largely into details, both the time and subject are too important to permit superficial consideration.

Let us therefore, first inquire briefly how the thing which we now know as specialization was evolved. When we resolve all the multiform effort of the world into elementals, we find that the one thing in the world is life. The one thing we are trying to do is live. All the isms and ologies are only a part of it, or helps to it. The effort of all who think and work truly is to increase the value of life, not to make life, that were impossible, but to render life more complete, more perfect.

Broadly considered, human life can be perfect only when a power and faculty is fully developed in absolute harmony with every other. But, as it would be impossible to entrust to any one man or set of men, the guidance of the race in all of its wonderful and bewildering individual capacities, man early came to be regarded as divided into three distinct entities, physical, intellectual and moral (or spiritual), and we have as a result three classes of men to whom the world looks for its uplifting. To physicians has been given the task of broadening and perfecting the physical life of the race. To the clergy the hardly more sacred work of enlarging the moral life and perfecting spiritual vision, and to the great army of teachers in every branch of science and art comes the glorious possibility of developing the intellect of man into something yet more godlike.

Medicine, theology, and philosophy, the first three specialties.

But so complex and all comprehending a thing as intellectual life could never be brought within the bounds of one man's power and knowledge, and so the educators have almost infinitely divided their work. Those to whom the care of souls was given soon discovered that no one expression of belief could be broad enough to provide scope for the infinitely out-stretching, constantly expanding individual spiritual life, and theology consequently divided and subdivided, and took to itself creeds.

While it is obvious how powerless any one man must be and must have been to cover with ever so great industry and genius the whole vast field of human possibilities, and while a division of labor was and is imperative, the greatest possible value can never be obtained by such division in any field without a right understanding on the part of those who undertake any branch of work of the economic reasons governing its divisions, and the great natural laws under which each man must work within his own lines.

The more deeply we think and study into the things of nature and of life, the more we become aware of a central unity running through all things; a fundamental law with which all other laws must co-operate, with which all truth falls in line, to which all logic finally points as the needle to the pole.

We are closely pressed in our industrial life in these days by failing to appreciate or to apply this law. The underlying principle of unity, in man as in nature, implies the most perfect harmony, the fullest co-operation, and at the same time, and only in consequence of this, the most perfect expression of individual life and liberty.

As the plant is dependent upon the sun and dew; as the tree is saved from death by the bird that lives upon the insect which would destroy it; as the tide answers to the moon and the world itself to the motion of the spheres, so must man recognize his unity with man and nature, acknowledge his constant mutual interdependence, must serve and be served, or lose his highest and most harmonious development.

The freest and most perfect expression of human power and life is possible, then, not by more and more separation, but by more and more unification; by a deeper and surer perception of the laws of the world, and a living in harmony with them. This does not preclude special work. It does not deny to any man the right to work

out the best that is in him in his own way, to choose his work within very narrow lines if he will. But that he may attempt something like perfection in one direction, he must lay down as well as take up. Specialization means concentration. Emerson has somewhere said: "You must elect your work; you shall do what your brain can and drop all the rest. Concentration is the secret of strength." Some apprehension of this truth, however dimly conceived, lay at the foundation of the first conscious division of work into what we call specialties. But specialization means also renunciation. "Drop all the rest, lay down as well as take up." Leave some work that one might do, that even might bring more generous results in its performance than the little bit that must be wrought at with such unflagging care to bring it to its fullest beauty and perfection. One must leave to some one else the work that might have been his own; he must relinquish some part of his inheritance; and if he would secure a true value in his exchange, let him see to it that what he gets is something more than a mess of pottage. His work will be to him little more than this if it is undertaken from motives of self-aggrandizement. If his object is a mercenary one, he will doubtless make money, which means food and clothes, as good as, or a little better than, his neighbor's; a little power and splendor, and a residuum, after careful analysis, of dust and ashes.

His object has been separation, not unification; he has striven against, not with, his brothers; he has undertaken a special work, not that he might do a little more perfectly than he could do more, and the thing that he has devoted his life to be, in consequence, of more value to the world, but that by doing some one thing better than any one else could do it, he might receive for himself more gain and glory. Both may become his, the gain and the glory. But *cui bono*. The greatest good will, of a surety, be denied him if he is content to seize these apples of Sodom. His work, I do not hesitate to say it, will fall short of that which is best.

Therefore, the value, that is, the worth, the importance, the utility of specialties, in medicine as in anything else, depends less upon the thing specialized, or the necessity for its specialization, than upon the man who does it and the spirit he works in. In comparison with this, all other reasons and reasoning are vain.

It has been said, and not without reason, that narrowness is a result of specialization.

But a broad man, liberally educated, does not necessarily become narrow by devoting his best energies to some one thing that he feels he can develop more power in than he could attain in any other direction. He may give himself up so completely to his chosen work as to almost exclude the possibility of any extended reading, not to say research, in any other direction. His time may become so absorbed by the demand upon it in his limited field that he can rarely even meet with those whose work is carried on with larger lines. And yet, if he maintains his true relation to the world; if his mental attitude be a right one, I insist that he need not become narrow in the generally accepted sense of the term. There will be much that he cannot know, that he must voluntarily relinquish the possibility of knowing, but he will be broadly interested in it all. He may renounce frequent fellowship, but if in his work and growth he is constantly and conscientiously one of the great human family, connected by the closest ties with every other, doing his part, however distinct it may be, not in isolation, not in the spirit of separation, but simply as his bit of the great whole, in all of which he has a personal interest, which is all his, and yet not his; which, but for the perfection of his, would be less perfect, which is never to be lost sight of in the exclusion of his own,—if, in a word, his special work, however absorbing it may be, does not get between him and life, he need not lose materially, or beyond compensation, by his adoption of a specialty. He does not renounce the spirit of fellowship, he does not glorify his own work to the exclusion of any other, he does not fasten his eyes so exclusively upon that which is growing under his hand as to lose all power of seeing it in perspective.

For, to reiterate, the value of any special work depends, first and chiefly, upon the power of the man who does it, to look at it constantly in its relation to that whole of which it is a part. From a failure to do this arises all the question as to the value of specialties.

Educators have recently been considering with much seriousness whether many of the most defective methods of our educational systems might not be directly traceable to the arbitrary division of that which was never intended to be divided—the life of man—into physical, mental, and spiritual, the result being unequal, and, consequently, unnatural development. It would seem as if the division were an imperative antecedent on progress, the mistake being

that in the division of work each worker should look upon his part as a whole in itself. He then might and did isolate it and himself from those to whom the work of perfecting the other parts had fallen, and the morbid conditions thus created have spread into every branch of study and of practice, and have worked endless disintegration where wholeness should have been.

You will bear with me if I seem to be dealing too long with abstractions. In the daily routine which absorbs our every faculty as physicians into one tremendous effort to restore and preserve such physical perfection as is possible to suffering humanity, we have little time or opportunity to think of that which it were worth our while not to forget,—which is not alien to the practical side of our work, but an integral part of it,—the fact that even before we are physicians we are men, and that the highest physical life is at its best but an expression of the intellectual and spiritual life.

We who have chosen for our calling the physical redemption of man cannot look too broadly upon our work, and that will not be lost time which we spend in getting it so in focus that we can have indelibly printed upon our mental negative a picture of what we are doing, and the relation our work sustains to the moral and intellectual life of our race. Still more is this necessary if we have taken but a small part of the medical practice for our field. The same laws hold good here as those that work throughout the whole wide range of human experience. Unity is strength, life; division is disintegration, death.

No one part of the human economy can be disturbed without affecting in some degree every other part; and it would be at variance with every law that we know in nature or in life to believe that, in studying thoroughly one branch of medicine, one might, without more than a very superficial knowledge of anything else, treat successfully the one part to which faithful attention has been given.

In the practice of a specialty one may not do any work outside of certain lines, but one must do a vast amount of study and investigation outside of those lines, and the work within must be constantly connected and fitted into that which lies without. One must work steadfastly in a restricted field, yet with constant reference to the whole; must be able to work alone, yet in a spirit of fellowship, to work in accordance with the great world-law of unification, and not against it.

When this has become not only possible, but habitual, then and then only is one in a position to understand and to prove the great value of specialization, by the concentration of force in one direction.

This concentration of force develops power in two ways. It makes possible a more profound intellectual grasp of the subject specialized, and if it be in the line of technical work, it gives tactile fineness and manual skill to a degree impossible to derive from general work. The devoting of much time to one thing renders the research and the acquisition of facts in regard to it so complete as to often outrun all previous knowledge, and lead to discoveries and inventions, to new refinements of diagnosis, added instruments of precision, and to scientific methods of investigation and practice that seem little short of marvellous; and it is a wonderful power of eye and hand, a wonderful acuteness of sight and touch, that are developed by doing intelligently one thing over and over again.

The value of this knowledge and technique is three-fold. First, to the specialist himself, since knowledge is power, and "All power," as Emerson says, "is a sharing of the nature of the world." Second (second only in order of sequence, not in importance) is the value to the large number of those whose increased soundness, and therefore increased power, is the direct result of the physician's dealing with the things that make strength. And third (in order of sequence) is the value to the world at large; for all increase of knowledge and power and strength becomes a part of the world's inheritance, and this is perhaps the widest and most positive value of all.

We see, then, the specialist taking his little bit out of the work that lies waiting for who can and will do it, giving to it the best of his time, his strength, his intellect, perfecting it more and more until he returns it to the world again, as a sculptor might the stone into which he has wrought his brain, his heart, his life, and which has become, in the process, of a value immeasurable.

The practical proof of the value of specialization in medicine lies, of course, in what has been accomplished through specialties that would not have been possible under the time and opportunities afforded by general medicine.

This is somewhat difficult to specify with exactness; but it is safe to say that the enormous results that have recently been obtained in surgery, gynæcology, obstetrics, neurology, and ophthalmology could

not have been reached but by that deliberate concentration which is indeed the "secret of strength." I need not dwell upon the work that has been done by the men in each of these different fields, although it would be pleasant to do so, for with much of it you are familiar, and to begin would make my task an endless one. But of the results of special work in bacteriology—a comparatively new field for specialization—I wish to speak a little more at length.

Whatever a man's work may be, whether generalist or specialist, whether Old School or New, bond or free, if he is a physician at all, one thing he must be familiar with, so far as study and investigation can make him so, and that is the nature of disease. This, I think, will be admitted without question, and no further argument will be necessary when it is remembered that no less a subject than that—the nature of disease—has come to be entirely reconsidered in consequence of the light thrown upon it by the investigations and discoveries of bacteriologists during the last few years.

I have somewhere read that the "new" opinion which now obtains was held by some several centuries before Christ, and has found credence in every age since, but it eluded proof, and consequently could not gain general acceptance until the specialization of bacteriology has brought knowledge on these lines to such a point of perfection as to establish as a fact what more than eighteen previous centuries failed to render more than "probable."

The contest between the bacterium and the phagocyte has added a new factor to our study of disease, and has made necessary a restatement of every pathological equation. It has robbed tuberculosis of half its terrors by localizing its origin and making largely possible its prevention. It has lowered the mortality in surgery to a phenomenal degree. It has demonstrated the source of typhoid fever and diphtheria, and it has proven the germicidal character of cholera and enabled us to keep it at bay. It has elevated sanitation to a position of first rank, and makes it possible for us to deal more intelligently with matters of dietetics and hygiene.

Not all our problems are yet solved, but we may now deal with them in a more direct and scientific way, and are much further advanced toward their correct solution by reason of the data put into our hands through bacteriological research.

As brilliant and important as have been the additions to our medical equipment through the medium of specialism in the past,

I cannot but believe that greater things are in store for us when we have learned more practically that specialization does not mean separation, and when specialists work more constantly in unison.

And now let us hear the conclusion of the whole matter, in words more strong and beautiful than I could hope to equal, words taken from the "Ethics of the Dust," by John Ruskin:

"The highest and first law of the Universe, and the other name of life, is 'help.' The other name of death is 'separation.' Government and co-operation are, in all things and eternally, the laws of life; anarchy and competition, eternally and in all things, the laws of death.

"Exclusive of animal decay, we can hardly arrive at a more absolute type of impurity than the mud or slime of a damp or overtrodden path in the outskirts of a manufacturing town. That slime we shall find in most cases composed of clay (or brick-dust, which is burnt clay), mixed with soot, a little sand, and water.

"All these elements are at helpless war with each other, and destroy reciprocally each other's nature and power; competing and fighting for place at every tread of your foot; sand squeezing out of clay, and clay squeezing out water, and soot meddling everywhere and defiling the whole. Let us suppose that this ounce of mud is left in perfect rest and that its elements gather together, like to like, so that their atoms may get into the closest relations possible.

"Let the clay begin. Ridding itself of all foreign substances, it gradually becomes a white earth, already very beautiful, and fit, with the help of congealing fire, to be made into finest porcelain, and, painted on, can be kept in king's palaces. But such artificial consistence is not its best. Leave it still quiet, to follow its own instinct of unity, and it becomes not only white but clear; not only clear but hard, but so set that it can deal with light in a wonderful way, and gather out of it the blue rays only, refusing the rest. We call it then a sapphire.

"Such being the consummation of the clay, we give similar permission of quiet to the sand. It also becomes first a white earth; then proceeds to grow clear and hard, and at last arranges itself in mysterious, infinitely fine, parallel lines, which have the power of reflecting not only the blue rays, but the blue, green, purple, and red rays in the greatest beauty in which they can be seen through any material whatever. We call it then an opal.

"In next order the soot sets to work. It cannot make itself white at first, but it comes out clear at last, and the hardest thing in the world, and for the blackness that it contained obtains in exchange the power of reflecting all the rays of the sun at once, in the vividest rays that any solid thing can shoot. We call it then a diamond.

"Last of all, the water purifies itself, contented enough if it only reach the form of a dew-drop; but, if we insist on its proceeding to a more perfect consistence, it crystallizes into the shape of a star. And for the ounce of slime which we had by the political economy of competition we have, by political economy of co-operation, a sapphire, an opal, and a diamond, set in the midst of a star of snow."

In this wonderful description we have seen the earth elements struggling in the mire of discord, until the law of unity came to work and created, out of apparently hopeless confusion, the most transcendent harmony and beauty.

You have noticed that all they require—these earth elements—that they may begin the work which is to lead them to the utmost perfection, is only that they shall be allowed absolute freedom of action, that no one should interfere with any other, and then they may work out their own salvation, each in his own way, not like any of the others, but each its best, and though separating itself, and accepting only what its own special developments require, still following the law of unity, and proving that not in concentration alone, but in co-operation, there is strength.

When we speak of law in nature, we mean the formulated results of close observation of the working of nature.

Nature is behind and higher than law, or in other words, law is the right interpretation of nature. It is worth our while, therefore, to study nature and to observe how similarly she works in great things and small, so that beyond question the formulated result of our observation, that is, the law, which controls atoms, is the law which must govern all rightly directed life of man.

The value of the widest collection of facts, the greatest achievement of mechanical skill, the deepest insight into the source and operation of distinctive forces and its prevention, lies in the perfect application of such special knowledge to the needs of humanity, to its best physical development.

"What matters it," says Longfellow, "whether you or I or another did such a deed or wrote such a book, so that the deed and book

were well done?" When something more of this high spirit shall permeate every branch of our medical practice, shall have become the highest directing force through which every man works, then will have dawned a new day in which the value of our work will be beyond all power of computation.

The Chairman of the Committee of Arrangements made a number of announcements.

The hour for adjournment having arrived, the discussion of the paper of Dr. Lewis on the Value of Specialties in Medicine was deferred until the morning session of May 31st.

On motion the meeting adjourned.

May 30, 1893.

At 3 o'clock P.M., the Sectional meeting in Surgery was held in the Hall of Washington. In the absence of Dr. Wm. B. Van Lennep, Chairman of the Section, Dr. George F. Shears of Chicago, Ill., was chosen temporary Chairman of the Sectional Meeting.

(For the Papers and Discussions, see the "Report of the Section in Surgery.")

SECOND DAY'S SESSION.

May 31, 1893.

The second day's session of the Congress of Homœopathic Physicians and Surgeons convened at 10.30 o'clock, pursuant to adjournment, Chairman J. S. Mitchell, M.D., of Chicago, presiding. After making the announcements of the day the Chairman called upon Dr. W. A. Dunn, the Secretary, for his report on Foreign Correspondence, which report was accepted and was as follows:

Report on Foreign Correspondence.

The Secretary begs to report that the Foreign Correspondence connected with the Congress has been exceedingly extensive. Letters and circulars were sent more than a year ago to all foreign representatives of our school whose names could be secured. The aims and plans of the Congress were explained and letters have been re-

ceived of cordial endorsement and tenders of assistance from Dr. Richard Hughes, of Brighton, England; Dr. John W. Hayward, of Liverpool, England; Dr. A. C. Clifton, of Northampton, England; Dr. Alfred C. Pope, of Grantham, England; and Dr. Edwin A. Neathby, of London, England. Also, from Dr. Theodore Kafka, of Carlsbad, Germany; Dr. Emil Schlegel of Tübingen, Germany; Dr. Theophilus Buckner, of Basle, Switzerland; Dr. Tommaso Cigliano, of Naples, Italy; Dr. P. C. Majumdar, of Calcutta, India; Dr. B. M. Banarjee, of Calcutta, India; Dr. C. Bojanus, of Samara, Russia; Dr. Oscar Hansen, of Copenhagen, Denmark; Dr. F. R. Day, of Honolulu, Sandwich Islands; Dr. Edward Adams, of Toronto, Canada; Dr. E. Vernon, of Toronto, Canada, and Dr. John C. Clarke, Secretary British Homœopathic Society, and many others.

The thanks of the Congress are due to Dr. Alexander Villers, of Dresden, Saxony, for copy of his *Directory of Foreign Homœopathic Physicians* for the use of the Committee; to Dr. J. W. Hayward, of Liverpool, England, for copy of names of British physicians; to Dr. Edward Adams, of Toronto, Canada, for copy of names of Canadian physicians: to Dr. B. N. Banarjee, of Calcutta, India, for reports; Dr. Emil Schlegel, of Tübingen, for copy of the work of the Homœopathic Clinic at Tübingen; to Dr. Louis Paez, of Bogotá, Colombia, for copies of works on Materia Medica; to C. Hurtado Curazoa for copy of his *Compendium of Botany;* to Dr. Theophilus Buckner, of Basle, Switzerland, for Journal notice of the Congress; to Dr. Tommaso Cigliano, of Naples, Italy, for copy of his grand *Repertoire of Clinical Homœopathy;* also for the copy of his *Homœopathic Materia Medica,* and a paper upon Morphia.

The Committee will move at the proper time that a vote of thanks be tendered these gentlemen.

Your Committee would report that the requests for reports and papers from our foreign confreres have met with most generous response and that the interest shown in the Homœopathic Congress throughout the world has been very great. The number of our foreign confreres in attendance upon the session of the Congress testifies to this deep interest.

Respectfully submitted,

WESLEY A. DUNN,

Secretary.

The CHAIRMAN: So many of the State delegates have already reported to the American Institute of Homœopathy that this item of business will be passed, and we will proceed to the discussion of Dr. F. Parke Lewis's paper, "The Value of Specialties in Medicine." Dr. Julia Holmes Smith has the floor.

DISCUSSION.

JULIA HOLMES SMITH, M.D.: *Mr. President, Ladies and Gentlemen:* There are some things so dainty in cookery (being a woman, I naturally refer to that), so dainty that they can never be taken up a second time. The spirituality has gone out of things, the beauty of a thing has departed after it has been presented and furnished upon the table. Now, it seems to me a trying thing, indeed, to take up the discussion of this exquisitely scholarly paper with its suggestiveness all forgotten, because things go out of our mind after we have had a dose of ether in the afternoon. Just think of this wonderful paper, and I have got to come in this morning and talk about it. "The Value of Specialities in Medicine." The ground was thoroughly covered, the arguments, *pro et con*, well presented, and what can I say except that I approve? What should we have for our Materia Medica but such men—men who have made a specialty like Dr. Dake and Dr. Hughes and Dr. Hale? What should we do about surgery except for the skilled surgeons who yesterday presented us with their theories? What should we do for culture and colleges but for the men who have given their lives to education in medicine, the all-around men, and where would we be for our specialities but for the men who give their time to that? And I can only emphasize earnestly and imperatively the necessity, while we acquire, as far as one human mind can, the thorough knowledge of our profession that we should go beyond and chose some one thing in which we should excel. And I repeat what I said on Monday evening that the reason we have so few women on our programme is because it is difficult to find women specialists in our schools. Let us start young women who are going to woo and wed the profession of medicine. Let all of you—it is past my time—let you who are beginning in your career as medical women chose some particular line of work in which you will excel, and when the next World's Congress is held you will rival the specialists among the men.

The CHAIRMAN: Is there any further discussion of this paper? If not, the address of Dr. J. P. Dake, of Nashville, Tennessee, on "The Future of Homœopathy," is in order.

Dr. Dake addressed the Congress as follows:

ADDRESS.

THE FUTURE OF HOMŒOPATHY.

By Jabez P. Dake, A.M., M.D., Nashville, Tenn.

Mr. President and Members of the Congress:

In proceeding to the discussion of the topic assigned for this occasion I pause to remark that expositions of the varied resources and products of nature and of art have been made in one country and another, but nowhere and at no time has there been one organized so well calculated to show the intellectual and moral, as well as the physical possibilities and achievements of our race, as the one in which we are now taking part.

The series of Congresses devised by the Exposition Auxiliary for the display of the various departments of science, morality and religion, which aim to elevate and ennoble, as well as prolong, human life, is destined to mark a new era in the advance of civilization on the globe.

The step taken by America, in this Columbian year, toward a more free expression and interchange of views upon a recognized platform, the new beside the old, and the heterodox beside the orthodox, must tend to soften harsh antagonisms and lead on to more united, as well as earnest, efforts for human welfare.

As we approach the end of our Medical Congress, held at this time in commemoration of one of the greatest events noted in history, it is well, in addition to the views and reviews relating to the past and present, to let our mental vision run on before to see what the future has in store for the healing art.

That the condition of medicine and medical organizations is long to remain as we see it to-day is not to be expected, nor should it be desired. Well satisfied as we may be with much in the constitution and resources of Homœopathy, we yet look forward to what is even better. It is my mission, in the brief address, to speak of some of

the better things therapeutic that continued observation and experience may bring. Had I the gifts of a prophet, enabling me to look forward a few decades clearly to discern coming changes, my task would be easy and you would doubtless enjoy a rare intellectual treat.

The Retrospect.—As it is, I must ask you, for a brief time, to cast the search-light of memory back upon the way we have come, and the eye of observation over the fields now occupied by our school of medicine, as we look forward only in the light of the past, calculating what will be from what has been and what is.

The retrospect at the outset brings to view one great fact, never to be forgotten, namely, that the discovery of the Homœopathic principle was unlike any other discovery concerned in the art of healing, in that it brought to light a natural law, fixed and paramount in therapeutics. It defined the relationship that must exist, between the medicinal agent and the disease to be overcome, in the words *Similia Similibus Curantur*.

So many have been the changes for the better in the current medical teaching and practice of the world since that day, it is not easy for us to realize the surprise and even consternation that prevailed upon the announcement of Hahnemann's discovery. What was then feared, in due time became a reality, the knights of venesection, and the cupping and leeching barber, and the blister-spreading and heroic dose-mixing apothecary were sent into comparative retirement.

With feelings of satisfaction we look back upon the steady development and spread of the therapeutic system based on the law of similars, especially upon the decided triumphs over such great destroyers of life as the Asiatic cholera and the yellow fever. Had it done no more to demonstrate its worth down to this time, than the indubitable records show it has done in the epidemics of those two well-marked and fatal diseases, it would deserve the confidence and esteem of the world.

The reception we see accorded to the new therapeutic doctrine by the medical men of the early part of the century, was hardly such as became scientific men. The attitude of medical journalism was decidedly adverse to its discussion.

Hufeland was the only editor with magnanimity and courage enough to open his pages to Hahnemann. In his journal for 1796 had appeared the dawning of Homœopathy, the first sugges-

tion of its basic principle. But even Hufeland afterward closed his columns, in deference to the wishes of medical men who were unable to bear the criticisms of Hahnemann, and in obedience to an authoritative medical censorship. And the prevailing policy from that time on has been either to ignore or simply ridicule Homœopathy. Hence the necessity for journals of our own, through which the new truth could reach the profession and the public, and by which its triumphs could be made known.

But as time went on and the followers of Hahnemann became more numerous, a curious state of things, puzzling to men of the other learned professions, developed in the ethical attitude of the dominant school. Graduates from the old colleges were cut off from fellowship and declared no physicians because they had ventured to push their studies beyond the old curriculum and to give their patients the benefit of the farther inquiry; and some students, avowing their intention, after graduating, to investigate and probably adopt the Homœopathic method, were refused diplomas. Doctors with a less complete education and less extended medical armamentarium, assuming an attitude of superiority, refused them professional aid. But the effect of such professional manners, while temporarily embarrassing to the ostracised physicians and their clients, was afterward very greatly in their favor. It led on to the organization of colleges and societies devoted to the new cause, while it revealed to the public a tableau anything but creditable to the good sense of the Old School—they on the one side looking down with apparent contempt on us of the other, and denouncing us as ignoramuses and quacks, when possessed of the same learning as themselves, plus a knowledge of Homœopathy! Beside individual and organized professional attacks, calling for organized means of defense, the New School had to contend, in many countries, with an unfriendly governmental censorship.

Examining boards with assumed and arbitrary standards, authorized by the State, have had a tendency to keep medical practice in the old ruts, and such will always be their tendency whether called Allopathic, Homœopathic or Eclectic. And great military establishments with dictatorial surgical staffs and red-tape methods, have always been unfavorable to the careful consideration and ready adoption of new therapeutic measures. The traditional supply table for the army and navy surgeons and for hospitals under governmen-

tal control, have known little change from generation to generation. Considering the influence of great standing armies and of authoritative boards of medical censors, it need not be surprising that Homœopathy has had to make its way inch by inch, in Germany, Austria, Italy, France and even England. As might be expected the fairest field presented for its adoption and growth has been in America, away from the domination of military medical staffs and arbitrary censorships.

But our retrospect, if it shows obstacles met with also shows advantages enjoyed, in the progress of the new medical philosophy.

We see that among medical men, not alone in this country, those who have been most ready to examine and adopt it, have been the well educated and most enterprising.

Physicians weighed down by an inordinate sense of authority and "regularity" or industriously plying their art, as in a tread-mill, never looking or moving about to see what may be found that is better, are not the first to appreciate what is new. And among the people, the very first to comprehend the value of curative methods based on a law of nature, have been the educated and most cultured classes.

If the old medical journals were closed against us the columns of the public press were not. If unfair representations appeared in the daily papers calculated to mislead the public and create prejudice against our cause, the opportunity was freely accorded for reply and defense. If suits in court were instituted for our injury, judges and juries with few exceptions, sustained us in our rights. And in matters of legislation where efforts have been made to check our progress or curtail our freedom, law makers have listened to our arguments and refused to deal unfairly with us.

The Present Status.—In surveying the present fields occupied by the New School, much is to be seen that is encouraging. There are numerous journals in different countries and different tongues, devoted to the therapeutic measures of Homœopathy and covering likewise every department of medical and surgical inquiry. More than a score of them are issued monthly in the United States alone. And our colleges, each with a full curriculum, and all up to the highest standard—indeed foremost in the extension of the general course and lengthening of annual sessions, are a source of credit and support to our cause.

In the matter of colleges, the disadvantages imposed by the censorship system of the Old World is very plainly seen. They have prevented charters for our schools, so that we have not to-day a whole school of our own in Europe, possessed of the power to confer medical degrees upon its students. Even in enlightened and liberal England, our school based on the London Homœopathic Hospital and conducted by some of the very ablest medical men in Great Britain, cannot grant a diploma after ever so much study or upon ever so thorough and satisfactory an examination.

Hospitals and dispensaries extending the benefits of our practice to the poor are seen in nearly all parts of the enlightened globe. Fortunately boards of censors cannot always intervene between the people and the desired means of physical relief even in despotic countries.

In its relations to other principles that have to do with the art of healing, I desire to say that Homœopathy has no antagonism whatever. What surgery can and should do, or chemistry or mechanics, to remove useless or burdensome tissues and products, or destructive parasites or poisons; and what palliatives should do to save life or mitigate useless suffering, we are agreed that they shall do. We are prepared to hail with pleasure every discovery and improvement in the ways and means of preventing or removing disease. If we hesitate and take time to consider, when the inventions of Brown-Sequard and Koch are heralded over the world, it is for the want of more affirmative proofs of their value.

The Future.—I come now to the point where I must ask you to turn your gaze from the past and present of Homœopathy to its future. Many and various have been the predictions made as to its destiny, some saying: "Like other popular delusions it will have its day and pass away." And others: "It will be the prevailing and exclusive mode of practice."

Applying analogy to the facts hurriedly passed in review, and reasoning from cause to effect, what do we really see before us? Let us consider:

Unquestionably the future has in store more exact methods of observation and clearer lines of reasoning, which must lead to a more definite understanding of the cases of disease amenable to the Homœopathic remedy.

1. Taking this view, my first proposition is, that *the true field or sphere of the Homœopathic law will be more clearly defined.*

The first and one of the most important questions presented to the physician in assuming the care of a patient, is as to the particular department of the healing art from which help must come. Is it a case for surgery, for chemical antidotes, for anti-parasitics, for change of residence, or occupation, or diet, or one admitting of palliatives only; or is it one requiring the Homœopathic remedy?

It is possible for a case to require help from two or more of these departments at one and the same time. In that case the agencies employed must be such as to co-operate with and not antagonize each other. But in determining the question whether a Homœopathic remedy is required, the physician must very definitely and clearly understand what affections come under the Homœopathic law or within its domain. It is a childish view to suppose that the physician calling himself a Homœopath is, in all cases, bound only to search his own Materia Medica for the needed remedy; and it is criminal for him to shut his eyes to other means where the Homœopathic remedy is not required and can do no good. Diseases, according to the help required, very readily fall into classes; and the Homœopathic class is made up of all such as are similar to those producible by pathogenic means, existing in organisms having the integrity of tissue and reactive power necessary to recovery, the essential cause having been removed or having ceased to be operative in the case.

For this class the Homœopathic law is supreme and universal, while for all others it has no application and no meaning. Years ago, while lecturing upon the principles and practice of medicine in Philadelphia, for convenience I divided the great field of therapeutics into two parts—general and special—the latter embracing such cases only as call for the Homœopathic remedy, and the former including all others. The special I also denominated the pathogenic, inasmuch as the curative agency in the sick was also the sick-making power in the healthy.

In truth, the different principles presiding over the several measures concerned in the restoration of the sick and the injured are complementary and not antagonistic to each other. The ardent Homœopath, conscious of the transcendent value of his method, need have no fear that a strict construction of the law he rests upon, and proper recognition of its limitations, will belittle its importance and weaken its hold upon the world. Confined to its legitimate sphere it covers ground enough and calls upon its ministers for enough

work to employ the brightest intellect and most stalwart energies of a man for a very long life-time.

2. In regard to the future of Homœopathy, my second proposition is, that *its basis and governing principle will survive all changes that may come, only more clearly defined and strongly established by human experience.*

It cannot in future, more than now, supply to the physician faculties to observe and note the symptoms of a case of disease on the one side nor of drugs on the other; nor can it furnish him with reasoning faculties rightly to compare them; but it most unmistakably points out the relationship between the two sets of symptoms which must be present when cures result. I can conceive of no discoveries possible in any department of medicine that can supersede or invalidate the truth arrived at by Hahnemann's generalization of facts, and over and over again confirmed in the treatment of the sick.

So long as the human organism is what it is, and the impressions of morbific causes and the resisting efforts of the vital forces what they are, there is an everlasting necessity that the medicinal influence that proves curative shall make its impression upon the same tissues and in a manner similar to that of the morbific. That medicines acting otherwise may prove palliative or remove the causa morbi and thus be needed at times, we do not doubt, but most cheerfully acknowledge.

The whole order of man's physical nature must be reversed, so that reaction does not follow action, and so that the continuing or lasting functional condition is not opposite to that directly induced by pathogenic agencies, if a time ever comes when the Homœopathic method fails. Terms may be changed, and explanatory theories may be different, but the essential relationship between the disease and the remedy will ever be Homœopathic; and, I may add, that such must be the case, however the curative impression is made, whether by a single drug or a combination of drugs, by heat or cold, by electricity or massage.

3. My third proposition as to the future is, that *the pathogenesy, or drug symptomatology constituting the Homœopathic Materia Medica, will be more thoroughly obtained and carefully displayed.* When Hahnemann came to understand the requirements of the Homœopathic law, and saw the necessity of true drug pictures, for comparison with the various disease-pictures presented to the physician, he soon

realized how poorly adapted to his purpose were the current works on materia medica. The most he could there learn of the remedies related to their cathartic, emetic, antispasmodic, and other such general effects on the sick. Experimentation, to ascertain their physiological or positive influence on the healthy human organism, had not then been started. He soon announced the necessity of proving drugs upon the healthy instead of the sick, and himself became a prover. But, poorly supplied with means, and assisted at times by students of his method, he worked on with one drug after another, adding to the symptoms thus obtained what he could gather from reported cases of poisoning, till he was able to form a new Materia Medica, which he published in 1805 with the modest title *Fragmenta de Viribus Medicamentorum Positivis.*

Good as were the results of his work, compared with the collections of the old Materia Medica, they yet came short of the demand of *similia.* It must ever be regretted that he allowed symptoms taken from the sick, while using remedies, to be recorded as drug symptoms. And his neglect to preserve and publish the records of each proving in the narrative form has been a lamentable defect. His publication of drug symptoms in schematic form, disconnecting and putting them out of their natural order, left them less useful to the practitioner and the writer of Materia Medica than they would or should have been. In following the Homœopathic principle, it is often quite as important to have a similarity in the order as in the other qualities of the symptoms compared. With regret I mention the fact, that subsequent provers, with few exceptions, possessed of superior advantages for the undertaking, have allowed the same defects to mar their work. Only of late has there been an attempt to gather and publish our drug provings in narrative form. The British Homœopathic Medical Society and the American Institute of Homœopathy, a few years ago, together secured the publication of the *Cyclopædia of Drug Pathogenesis,* under the lead of the great Materia Medica scholar, Dr. Richard Hughes. The four large volumes contain all known records of reliable provings, except those embraced in the *Materia Medica Pura* and *Chronic Diseases* of Hahnemann, which it was thought best to let stand by themselves. Valuable as the *Cyclopædia* is, it would have been yet more valuable had all the provings detailed been made, and the symptoms recorded, in a more thorough and discriminating manner. While it is the best we have, it is not equal to the future best.

At this point, I beg to be excused for a slight personal mention. Just thirty-six years ago, in this city, I read a paper before the American Institute of Homœopathy upon the defects of our pathogenesy, and proposed for its improvement a college of drug provers —an institution under competent management, having a body of students, male and female, acting as subjects of drug influence while receiving medical instruction, during the long vacations in the ordinary medical schools; and, while under expert observation, all the means for detection and measurement of abnormalities, useful in diagnosing diseases in the sick, being employed. I showed the unavoidable defects in provings made, here, there, and everywhere, by busied, wearied, and worried physicians, exposed to the vicissitudes of weather and sick-room influences, with little if any critical observation of their symptoms. Again, and again, in after years, I urged the profession to take hold of the work, and make our Materia Medica more in keeping with our matchless therapeutic law. I am happy, on this great occasion, to say that the tendency is now toward more thorough and careful drug-experimentation, not only in our school, but in the Old School as well.

Dr. T. Lauder Brunton, one of the brightest of all the orthodox teachers of Materia Medica in England, writing of the therapeutist, not long ago, said:

"Evidently it is his special province to find out what are the means at command, what the individual drugs in use do when put into the human system. It is seemingly self-evident that the physiological action of a remedy can never be made out by a study of its use in disease."

The increasing number of liberally educated young men in our ranks, who are critical and logical, not satisfied with observations casually made and experiments not properly guarded against sources of error and corruption, look with surprise upon the rank and file of the profession apparently satisfied to go on year after year, depending upon a hash and rehash of what was not entirely sure and reliable at the outset. It need not be surprising if, ever and anon, some of them become disgusted with the "Tithing of mint, anise and cummin" in those who are apparently heedless of the "weightier matters of the law." If the plan of a college of provers is Utopian, and if the influence and power of drugs cannot be ascertained by direct and scientific experimentation, we may as well consider the abandonment of drugs.

One alternative is left, if the present encouraging prospects fails and the physiological laboratories and thorough drug provings do not come, the trade circulars of the great drug houses, displaying the refreshing romance of clinical experience, that are being showered upon our desks like the leaves of Vallambrosa, may enable us to practice empiricism with some hope if with no satisfactory fruition. But, jesting aside—the healthy vital test will not fail.

I leave its consideration now, with the remark that the great university that shall lead the way by devoting its entire medical department to *Original Research in Physiology and Pathogenics* will cover its name with glory and bring to its regents and faculty and student-experimenters the gratitude of the world during all time.

4. Looking again to the future of Homœopathy I remark that some changes are to come in matters of pharmacy and posology. While drug substance will be commuted far enough to render its particles susceptible of absorption and conveyance to the tissues to be impressed, or to expand its surface for more ready contact; and while it will be attenuated and mixed with neutral vehicle enough to render it easy of division into proper doses, it will not be treated by bottle-washing methods in the effort to get rid of the drug altogether and secure only its disembodied spirit.

The unmerited odium that our peerless law of cure has been obliged to bear, these many years, by reason of the unwillingness of some of its adherents to employ the sensible doses with which the law itself was demonstrated and with which its most striking victories were won, will be wiped away.

I have now spoken of the leading changes destined to come in the interior economy of Homœopathy and its practical applications, namely, as to its legitimate domain, its persistency or permanency, its pathogenesy and its posology.

I must now briefly refer to its future position and relations in the general medical world.

External Relations.—It is a great mistake to suppose that Homœopathy is found only in the practice of men calling themselves Homœopaths. Not only has its negative influence wrought changes in the therapeutic measures of the masses of medical men in all enlightened countries causing them to abandon blood letting, blistering and heavy doses of poisonous drugs—it has brought the most intelligent of them to prescribe many of our remedies, as we do, in

obedience to the rule of similars, and in small and pleasant doses. It has caused them to look upon the healthy human test as the proper mode for the study of drug influence in the formation of materia medica. It has also led them to pay a great deal more attention to dietetics and general hygienic measures; and why, pray, should it not do so, since they have often attributed our undeniable cures altogether to such regulations?

Our successes and evident favor among intelligent and influential people have gradually raised us in the esteem of our Old-School brethren, till their society doors are open to us on the simple condition that we drop the qualifying term "Homœopath" from our list of titles. And we are no longer regarded as beyond the pale of professional recognition and help by reason of our additional acquirements in therapeutic knowledge! But, putting all levity aside, we hail with satisfaction the growing acceptance of our views and adoption of our measures, and would be far from saying one word calculated to prevent so great an improvement in the current medical practice and such positive benefits to the sick under its care.

We do not insist upon their calling themselves "Homœopaths" in order to enjoy the use of remedies that we know cure Homœopathically; nor, on the other hand, do we see any occasion for us to drop that title from our institutions because we recognize and employ now, as always, surgical, chemical and mechanical, and other means which are neither Homœopathic nor Allopathic. I fail to see why we should be any worse for the use of a name that indicates very correctly our confidence in the principle *similia*, when no medical man can be so ignorant as to suppose that we do not understand and follow other principles and use other measures as occasion demands.

In conclusion, upon our future name and relations, I would say that when the right of every educated physician to choose his method and means of cure becomes generally recognized, and his privilege to candidly state his views and temperately criticise the views of others on the floor of any medical society or in any medical journal, is accorded without reproach or abuse—then, and not before, may it be expected that the societies and institutions of the New School will be disbanded or known by no distinct sectarian title.

It cannot be forgotten that our organizations, our journals, colleges, hospitals and dispensaries were matters of necessity for the maintenance of our freedom to choose and apply the new therapeutic

measures and to extend their benefits to suffering humanity. But for them, the most important reform in the art of healing now enjoyed would have been arrested at the start.

With the freedom existing in associations for scientific research and the promotion of social reforms, where each idea and proposition may have a hearing and due consideration, there would be no excuse for different schools or separate organizations in medicine. The only unity possible among medical men and medical associations will be the kind that consists with diversity and with the liberty on all sides to think and work, with all due respect, each on his own lines. Physicians should be as free to criticise each other's opinions and measures as are lawyers, whose sharp contests make them none the less personal friends to each other and none the less worthy members of the bar.

As matters stand, the right forward step to secure unity is one of common politeness by one medical man toward another and by one association toward others. It requires no disagreeable concession or damaging compromise for one to treat another with the courtesy due among men equally educated and equally devoted to the same cause. There needs to come among us a "Y. M. M. A.;" a Young Men's Medical Association, that, like the "Y. M. C. A.," can practically solve the great problem of unity in diversity and secure working relations between medical men and medical organizations, which-with a common purpose in view, are now moving forward on different lines.

A special dispensation of mercy alone can save us, if we are more bigoted and touchy, or have less of practical sense than the religious sects, that the Christian young men are, even now, gradually pulling together.

Discussion.

The Chairman: This paper will now be discussed by Dr. B. W. James, of Philadelphia, Pa.

Dr. James, of Philadelphia: Mr. Chairman: This papers covers the ground so thoroughly that if I only said that I approve of all the views expressed therein, I think I might rest my discussion there. But I will say that I agree with him in several points, and yet there are other points on which he might have touched in which I think the future of our system in its development will be grand and progressive. I agree that it has nothing in opposition to other principles of medicine—other true principles of medicine—that will

conflict with it in its progress. That its rise and the discovery of the law was peculiar—and its progress is peculiar simply because in past centuries there was no known scientific law, I might say of permanency in the Old School, which could guide every physician in the application of his remedy to every known set of symptoms or to any known disease, and we know that whenever an epidemic occurs we care not for the man; we care simply for the symptoms, and we treat those symptoms by the law of similars scientifically, and I believe that the application of these remedies in diminutive doses is the proper mode, the only one, that will ever be demonstrated physiologically to be the true one.

Anatomists and histologists tell us that the different organs are made up of tissues, and these tissues are sub-divided into minute forms, and these are built up of cells microscopically small, and that these minute cells have a special and definite action, not only in the formation of those tissues but in their ability to carry through these tissues the principle of life, removing the waste and supplying new material; and when there is a disturbance in these minute microscopic cells we have disease. How are those cells to be brought again into harmony? I believe that remedies must be so diluted, or made so fine, that they must reach these microscopic cells, and that the method which came in along with the law of similars is the one which divides the remedy so that it can reach the cells. But beyond all that, these cells each have their own respective spheres of action, and you take the cell of one organ, for instance the cell of the pancreatic gland, and the cell of the liver, and of the salivary gland, and each will carry its own product. It will have the food which makes its impression upon the others individually and separately; and I believe that such is the action of remedies in the provings upon a healthy body. Each remedy selects certain tissues, just as the nutritious principles do, and there is the need of the proving of our remedies upon the healthy system as Dr. Dake has stated. The proving of these remedies upon the healthy tissues points out the definite ultimate cells upon which each remedy acts. Thus we know that some remedies act upon the nervous system; some upon another part. The scientific application of a remedy to these cells, and structures, and organs, must be upon some definite plan such as we have found out through Hahnemann's law of similars, and the proving of drugs. But I will call your attention to the indelible nature of the impress which Homœopathy has made upon the world. It has been made not only upon the profession, but upon the laity and I believe it will be permanent.

Difficulties have arisen along the pathway of Homœopathy but they have been all overcome; and the future difficulties, as they may arise, will all be surmounted and our system in the future will grow and strengthen throughout the ages.

THE CHAIRMAN: This paper will be further discussed by Dr. Lizzie Gutherz, of St. Louis, Mo.

DR. GUTHERZ: *Mr. President, Ladies and Gentlemen:* A mother in India once said to me: "My dear, when the bread is not properly baked and the meat is not thoroughly done, don't call the attention of your guests to it for they will probably never find it out." And yet, after listening to the essayist saying that thirty-six years ago in this city he read a paper before a convention, I hesitate to discuss a paper written by so able and gifted a man as Dr. J. P. Dake, and on a subject so far reaching, so vast, so pregnant with interest to all as the future of Homœopathy. The essayist takes the ground that Homœopathy will be more clearly defined in the future, yet the principle of *similia similibus curantur*, taught by the immortal Hahnemann is the same to-day as it was in the past. He tells us that the governing principle will survive all the ages, only it will be more clearly defined and more strongly established in human experience. In this free land of ours the great future of Homœopathy is to be placed before the world, and in our city the pharmacists and druggists tell us that where Homœopathy has most thrived it has modified the healing art of the Old School, that they don't give their poisonous doses in the same heavy way that they once did. It is through the colleges and their high standards that our cause will be benefited further. Examining boards, when composed of only one school, are political machines and ought to be abolished from the face of the earth. The educated people of the country are coming to the front and accepting our school in a way that never would have been acknowledged had it not been for this association. The intellectual men who compose this body, through their intellectual ability, purity and truth, have placed a gem in the diadem of Homœopathy that no other school has ever known.

THE CHAIRMAN: Dr. I. T. Talbot, of Boston, will now discuss Homœopathy in the medical colleges and hospitals of the United States.

ADDRESS.

MEDICAL EDUCATION IN THE HOMŒOPATHIC HOSPITALS AND COLLEGES OF THE UNITED STATES.

By I. T. Talbot, M.D., Boston, Mass.

At the Fourth Quinquennial Session of the Homœopathic Congress held at Atlantic City in 1891, I had the honor to present a paper on "The Duties and Responsibilities of Homœopathic Colleges as Leaders in Medical Progress." This essay met with the approval not only of the Congress but of the American Institute of Homœopathy and of its Intercollegiate Committee and some of its suggestions have been adopted by those bodies. The four years' course of required study has been made the rule for all our recognized colleges. Without question, this single step was the most important one ever taken in the cause of medical education in this country. With mature age, a thorough preliminary training, a year spent in the study of the collateral branches of medical science, and three subsequent years of solid work in properly equipped medical colleges, there can be no doubt of the great elevation thereby of the standards of medical education and of the rapid development of medical science in all its departments.

In considering at this time the subject of "Medical Education in the Homœopathic Colleges and Hospitals of the United States," I desire to refer to the paper mentioned as containing certain important matters on which the subject of future medical education properly rests, and without repeating what was then said, to consider our present position and the proper methods for future progress.

In the first place let us consider and acknowledge the debt we owe to our medical colleges which, established and sustained at great effort and expense, have done so much for the development and

spread of Homœopathy, and with it the advancement of medical science in this country.

From these schools within the last forty-five years, about ten thousand physicians have been graduated and are scattered in various parts of this and foreign countries. The great majority of these have become good practicing physicians with a knowledge of Homœopathy which, but for these schools, they probably would never have attained, while many have become distinguished in science as well as medicine.

These medical schools and colleges have often labored under the greatest disadvantages. Not only have the instructors at times been unable to illustrate sufficiently their teachings by clinical results, but students have oftentimes been debarred from the chance of visiting hospitals in which they could practically study disease. With effort and energy these obstructions have been largely overcome, and the schools which from the first could find their counterparts in the greater number of other medical schools, have as a rule so utilized their possible opportunities that even their clinical instruction now equals the average amount, and in many cases far exceeds it. At the present time there are sixteen Homœopathic colleges recognized by the Institute, and three or four others which have been organized. While I shall not in this paper attempt to do justice to any college, those represented in the American Institute of Homœopathy will be briefly mentioned. Of these, three are connected with State Institutions, viz.: The Homœopathic Departments of the Universities of Michigan, Iowa and Minnesota, and are supported by their several States. If these schools continue to be properly conducted and successfully managed, there is no doubt that the people of those states will feel sufficient pride in their success to contribute the necessary means for their support and proper equipment.

The Hahnemann Medical College and Hospital, of Philadelphia, is the successor of the Homœopathic Medical College of Pennsylvania, established in 1848, and while it has done valuable work from the beginning, it has within the last ten years made its greatest advance. It has secured an eligible location, and erected thereon a fine building for a college, dispensary and hospital; and its success fully warrants the far-seeing policy which planned and executed these improvements. Of the work which is being done there, any college may well be proud, and its graduates are an honor to the medical profession.

In Cleveland, the second Homœopathic college was established in 1849, and though it has labored under many disadvantages yet it has made much of its opportunities, and the greatest credit is due to the courageous, self-sacrificing founders and supporters of that institution. Earnest and faithful work has been done therein and upon its roll of graduates are to be found some of the ablest physicians of our school. Later a division of the school established a second college in that city, the Cleveland Medical College and though many regretted the division, yet we cannot say but what the stimulus of enthusiasm and determination which opposition sometimes engenders may make both of these schools in the future more efficient than either would be alone.

In 1858 the Homœopathic Medical College of Missouri was established, and though it has met with many changes and alterations in fortune, yet there can be no question that much work of real value to the profession has been accomplished there, and at present its prospects are perhaps brighter than ever.

In 1859 the Hahnemann Medical College of Chicago, chartered four years previously, opened its doors to students, and there are some here present who remember the severe struggles and sacrifices which were required to establish and support this school in its earliest years. The amount of energy displayed and the success which has attended it are only characteristic of the wonderful city in which it is located, and among its alumni are found many of the most influential men of the profession. The experience of this school, like that of Cleveland, shows that differences of opinion may widely separate friends, and the establishment, in 1876, of the Chicago Homœopathic Medical College caused much severe criticism, yet the success which has attended it and the amount of good work done may perhaps justify its founders.

In 1860 the Metropolitan City, New York, established the New York Homœopathic Medical College, and from the large number of distinguished physicians in that city it has always secured an exceptionally able faculty. That it has had its struggles goes without saying, but in the establishing of hospitals which could be used for clinical teaching, New York exceeds in number any other city. The wealth and influence of that city should give advantages to the college which no other location in this country could excel.

In 1863 the New York Medical College and Hospital for Women was established under favorable auspices, and though colleges for

women alone have met with strong opposition, even from their own sex, yet it has struggled on until it has obtained a success gratifying to its early friends.

In 1872 the Pulte Medical College, of Cincinnati, was established, named for, and to a certain extent assisted by, our distinguished confrere, Dr. J. H. Pulte. That it has done much valuable work is certain, and many of its graduates are to be found holding prominent positions.

In 1873 Boston University established its School of Medicine. It was not an easy matter, but it has proved a success, and from the first has maintained a high grade of scholarship. An entrance ——— (?) which shall be in preliminary branches,—and during this first year students may be under special instruction of a physician,—after which three years must be spent, before graduation, in attendance upon the college courses.

When we consider the great advance in the methods of medical study which has been made in the last few years, and see the very decided changes from didactic to clinical instruction; when students who, not many years ago, were graduated simply in recompense for fees taken, while now examinations more or less stringent are required in every case, we can but feel that these changes in method are doing much for the improvement of medical instruction and the advance of medical science.

The change has indeed been very great, and while the tendency is still in the direction of improvement, and the whole sentiment of the schools, the profession, and the community requires more thorough instruction, is it not well for us to consider how far we may progress in this direction to advantage, and not to hesitate or stop until we have reached the most useful limit?

It has often been the case that the student who acquired his degree in the shortest possible time and knew the least of medical science was the most confident of his own superior knowledge, and was sure that he knew about all there was to be learned. On the other hand, the physician who has been thoroughly instructed finds open to him so many sources of learning and so much of the unknown in the ever-varying forms of disease, that he is the more ready to devote himself to study until he has mastered at least a modicum of what science has revealed in medicine. The ignorant "doctor," if such a solecism may be allowed—in which to acquire all that is nec-

essary for his purposes; how much time is essential for the student to spend in acquiring the necessary amount of knowledge to make him the learned physician—the one who is to give such character and tone to the profession as shall command the respect of the community and the confidence of his associates? The four years' course as marked out by the Intercollegiate Committee of the American Institute of Homœopathy is certainly excellent, but does it go far enough? The first year is given to elementary medical study; there are then but three subsequent years given to the whole of that science and art, than which none is more comprehensive and varied. After the most careful study of this subject in its various phases, this time seems altogether too short to accomplish the needed work, and at least five years should be required from the time of leaving the ordinary literary studies to acquire essential knowledge of a subject so intricate as medicine.

The following presents a comprehensive schedule of the required work:

First Year.

General Chemistry (Laboratory Course and Recitations).
Physics (Laboratory Course and Recitations).
Zoology (Laboratory Course and Recitations).
Botany (Laboratory Course and Recitations).
Microscopy (Laboratory Course).
Medical History.
Latin.

Second Year.

General Anatomy (Recitations and Dissections).
Physiology (Recitations and Laboratory Work).
Histology (Laboratory Course).
Pharmaceutics (Laboratory Course and Recitations).
Minor Surgery.
Sanitary Science.
Dietetics.

Third Year.

Anatomy of Nervous System and Special Organs (Dissections).
Embryology.
Physiology (Laboratory).

General Pathological Anatomy (Demonstrations and Recitations).
General Surgery.
Materia Medica.
Obstetrics.

Fourth Year.

Pathology and Therapeutics.
Special Pathological Anatomy (Laboratory Work).
Operative Surgery (with Clinics and Laboratory Course).
Topographical Anatomy (Dissections).
Materia Medica.
Obstetrics (Clinical and Operative).
Diseases of the Chest and Throat.
Clinics.

Fifth Year.

Pathology and Therapeutics.
Diseases of the Nervous System.
Diseases of the Skin.
Diseases of Women.
Diseases of the Ear.
Diseases of the Eye.
Electro-Therapeutics.
Medical Jurisprudence and Ethics of Medicine.
Dispensary Practice.
Clinics and Clinical Reports.
Thesis.

In addition to the subjects already enumerated, there are constantly arising many points of practical instruction suggested by the different forms of disease and the accompanying circumstances, which can be discussed by the various instructors with great value. Time becomes an element of importance, and the student, however stupid, by continued contact with those well learned in the various subjects, will gain a large amount of knowledge.

But it can be readily seen that a medical school for the proper teaching of all these subjects requires the most extensive facilities, which are necessarily attended with great expense. The hospital should be large and commodious, the dispensaries sufficient to afford the greatest amount of clinical work, the numerous laboratories

thoroughly equipped, with a sufficient number of competent instructors to properly direct the course of the student, and clinical material should be secured to illustrate as fully as possible all the essential points in medicine. The very detail of this work is startling, almost appalling, but the end to be gained—the physical advantage of the whole human race—makes the subject one well worthy of the greatest human effort.

Is there any class of physicians to whom we could appeal for this with better reason than to those of our own school? From the time of Hahnemann to the present, those who believe in his principles have, as a class, been independent, earnest, progressive men, not accustomed to shrink from sacrifice or personal effort; are they not equally ready now? It is not a matter of a few months, or even years; but it is for us to set our standard of what should be done as high as possible, and then bend our efforts to its accomplishment, whatever time it may require.

We are now nearly at the close of the nineteenth century, environed by mental activity and a rapidity of progress before unknown in the world's history. Here in the City of Chicago, which stands pre-eminent for its energy and powers for great success, may we not take on some of the qualities of our surroundiugs, and determine that at the beginning of the twentieth century in all the Homœopathic colleges of this country we will aim to reach the high standard of medical education which five years of close study can alone give to the physician.

Discussion.

The Chairman: The address will first be discussed by Dr. O. S. Runnels, of Indianapolis.

Dr. Runnels: Homœopathy to-day holds pre-eminence in matters educational, and we want to do nothing here that shall in any way take her down from that proud position. We must keep our forces well to the front and be the leaders in all educational matters, for it is a fact that the American Institute of Homœopathy is the only national body that requires the high standard that she does. There is no college there recognized that does not require a four years' course from her students. That is a great advance. And for several years students matriculating have been informed that they are to have a thorough education first, and that they can get their degree in no other way. I am sure that Dr. Talbot has taken the right stand here to-day in looking forward to a time when greater requirements must be had, when the student shall have to pass

five years in preliminary work before he can go forth to practice. A great deal depends upon the stand the laity takes in this matter. Medical colleges can will to do certain things, but unless they are supported by the profession at large they will be powerless to accomplish that work. I think the medical profession should patronize no college which does not require the highest of their students. From the earliest times in Homœopathy we have been friends of education. We look back to a founder who was not a mountebank, but who stood at the very top of medical requirement, and so all along down the line, our leaders have been men who have shone in the firmament of knowledge.

THE CHAIRMAN: The address will be further discussed by Dr. A. P. Hanchett, of Council Bluffs, Iowa.

DR. HANCHETT: I feel illy prepared to discuss this question, for I have only heard the paper as you have heard it. I have a feeling of pride and of great satisfaction at all times to know that the representatives of our school of medicine could feel that their position was on firm ground, that we had taken the lead in the matter of a higher education.

A few years ago when one of our Western States organized its board of examiners, and the question of schools and colleges came up, the diplomas from which should be accepted as credentials, the whole field of the medical colleges was thoroughly and carefully canvassed. Something like 150 schools that issued diplomas were found to be in existence in this country; of that number but fifteen were Homœopathic. Ten per cent. of the Allopathic schools were ruled as unworthy to have their diplomas recognized, whereas 100 per cent. of the Homœopathic colleges were pronounced by this non-partisan board as thoroughly reliable, and whose diplomas should pass current.

It strikes me there was one point in this paper which was overlooked, and that was the requirement for preliminary education. Before a student approaches us we should say, are you ready young man, or young woman, to commence the study of medicine? have you, had the mental training that must precede it? And then if we should positively demand such preparation we would bring a better class of men and women into our colleges. I contend that the medical profession must make the same requirement made by some of our religious denominations. I understand that in some of them they are not admitted to the theological schools until they bring a diploma showing a classical education and thorough mental training. It is this preparation that I am laboring for, and I have many times expressed the conviction that I should accept no student who has not had a thorough training or a college course. In that way only I believe are we to bring the standard of our medical men up to where it should be.

THE CHAIRMAN: The paper will be further discussed by Dr. T. G. Comstock, of St. Louis, Mo.

DR. COMSTOCK: I was very much pleased with Dr. Talbot's paper, and I thought the Congress might be proud to know that the Boston University was the first to insist upon a four years' course of study, and if you will look over the catalogue of the Boston University you will find for several years that one-third of the students are A.B.'s. Now one year ago at Philadelphia I had the honor of being the President of the Alumni of the Hahnemann Medical College, and made an address there in which I insisted that hereafter none should enter a medical college unless they had the degree of A.B., and moreover, I made the prediction that within ten years from now every medical college would require a course of five years instead of three as at present.

THE CHAIRMAN: As there is no further discussion on this address the paper of Dr. Alexander Villers, of Dresden, Germany, on "Historical Development of Homœopathy in Germany," will be read by the Secretary.

ADDRESS.

HISTORY OF HOMŒOPATHY IN GERMANY.

By Dr. Alexander Villers, Dresden.

At an international meeting, like our Congress in Chicago, I cannot, nor dare I, discharge the duty allotted to me, to give the "Historical Development of Homœopathy in Germany," in the ordinary manner as is customary with such retrospective work. You may read in all newspapers, of the numerical increase or decrease of the adherents and the representatives of Homœopathy. The interest regarding hospitals having been erected or having ceased to exist, does not extend beyond the respective country or city. But considering the total aspect of the development of Homœopathy in Germany, we must be surprised at the fact, that Homœopathy has made so little progress in the land of its birth, and why now, after existing almost a hundred years, its representation in medical circles in Germany is still so limited, whilst the general public is continually increasing its demand for it. If we compare other countries in this direction, especially the United States, we find that, since Homœopathy has been introduced in America, a much stronger development has been accomplished there, in a much shorter period. Although we know from pathology, that fresh germs develop more rapidly than older ones, we cannot attribute this wide difference in the evolution in both countries to the "need of expansion" of the newly established medical fraternity only. At the time when even here, the first disciples of the master came forward with apostolic inspiration, their number was small, their activity rarely exceeding their near surroundings.

The progress of civilization is warranted by the continuation of intellectual work, not merely by single individuals, but also by entire nations, as soon as the love or the power to work, has weakened in the predecessor. Thus the entire medical science during the Middle Ages was under the influence of Humoral pathology delivered down from the Arabs, until German labor broke this spell, and the first

standard-bearers of a new medical era appeared in the persons of Vesalius and Paracelsus. While Vesalius introduced the anatomical investigation, and in consequence, the foundation of the objective proofs for medical conception, Paracelsus opened the way to a view of life and the living body, which we find a remarkable admixture of physical interpretation and purely philosophical speculation. It is natural to the average man that he is more attracted towards the fantastic centre of theoretical views, than toward the cultivation of dry, barren soil of thorough investigation. Thus the contemplative part of the teachings of Paracelsus were strongly brought forward, and the *Archaeus Maximus* still reigned supreme in Germany, whilst the Romans and Anglo-Saxons, already showed more interest for a physiological and anatomical basis of their theories. From the *Archaeus*, Stahl constructed the conception of a "soul," which was worthless to natural science, thus originating the school of the Animists, and the main object of the natural philosophers at that time was the interpretation and formulation of life-force.

At this period Hahnemann makes his appearance. He emphatically demands the experiment; only upon such a safe foundation will he erect the new structure of his Similia Similibus therapy. In this he is a follower of Vesalius and a most prominent pioneer of modern physiology and pathology. But on the other hand, he studies the life-force and its derangements and seeks to remedy the latter by the administration of medicinal potencies, which are to work only dynamically, not physically. At that time of philosophical speculation, his demands for experimental proofs were not understood, and later on when the experimental objective tendency of the French anatomical school became prevalent also in the medical science of Germany, his superabundance of views on life-force, dynamism, etc., prevented the appreciation which he fully deserved. If but only one of his many opponents had really read him and if this reader had taken pains to strip his arguments of the garments which they had to wear in accordance with the fashion of his day, it would have been long established, that Homœopathy is the medicine of the future, because it always admits the proof of its assertions, thus resting upon facts in the most modern sense. Naturally, Homœopathy refrains from using rounded expressions, so to speak, scientific idioms like other therapeutic schools; as for these it is too clear and despises the cloak of phraseology or the finely formed technical terms for the designation of conditions of which the recognition is wanting.

But the attempt, to adapt Homœopathy to the dominant school of medicine, has been made repeatedly; partly by competent students, partly by men who did not grasp their object. The *Homœopathische Therapie auf Grundlage der Physiologischen Schule*, by Dr. Joseph Kafka is undoubtedly the most able attempt in this direction in German literature. Kafka possessed the knowledge, the intelligence and the energy to accomplish such a task. If he did not succeed, the failure was not due to his want of ability but because of the inadequacy of the object. Let us hope that Physiology will explain to us in the future, why certain remedies will affect various organs of our body; for even if we recognize "organic remedies" for convenience, as for instance, heart, stomach remedies, etc., we only wish to thus indicate that we know their action on those organs more thoroughly than that on any other regions; but we have to insist on the totality of symptoms for prescription. Pathological names of diseases are least suited as guides in the difficult selection of a remedy, as they mainly refer to an artificially constructed conception. The best proof for this is the latest investigation of causes of disease. None of the vital functions of diseased germs can influence our selection of drugs, nor even the ætiological points which predispose the body, for the development of the former will help us in this direction; but still our therapeutic success vastly exceeds that of the Old School in the treatment of infectious diseases, even when we do not know the character of the infection.

While Kafka's work is an excellent one of its kind, there is another book by an anonymous editor, published by Wilmer Schwabe, the Homœopathic pharmacist, at Leipsic, which has done much to injure Homœopathy. It makes the attempt to adapt Homœopathy to the physiological school in a purely mechanical way. It simply substitutes names of Homœopathic remedies in the place of Allopathic ones, after each chapter on special diseases, after a fashion of the small domestic treatises written for the laity. This book has done a great deal of mischief, especially in the hands of younger physicians intending to study Homœopathy.

In Germany, as well as everywhere, the general progress of Homœopathy vastly depends upon its practical success with the public. The patients and their friends induce its spread; notwithstanding their gratitude they really do little to actually further it. Only in one state of the German Empire, in Wurtemberg, the local society,

Hahnemannia, successfully agitated the state government and the legislature. Hundreds of other minor societies who bear the name "Homœopathic" have done nothing, their only aim being to get their remedies and periodicals at wholesale prices. For decades the business centre of these societies has been the pharmacy of the above-mentioned Dr. Schwabe in Leipsic, who, as a thorough business man, has furthered and assisted them in every possible manner until he founded a private polyclinic as a branch of his establishment for the benefit of his customers, and became at last the greatest publisher of German Homœopathic literature. Thus Schwabe's pharmacy, with its branches, appears to be the centre of all Homœopathic interests in Germany in the eyes of those who stand outside the real Homœopathic fraternity, but who incline towards them. Certainly five-sixths of those young physicians who became Homœopaths during the last ten years have there received their Homœopathic training, or have at least spent some time there. Therefore, these young men have taken Schwabe's book, with the anonymous editor for a guide in their studies. For those who have been so familiar with the Allopathic fashion of having the remedy fitting the disease, this book naturally seems very convenient and promising. Only later on, after they have become acquainted with a thoroughly educated Homœopathic physician, they begin to perceive that the study of Homœopathic Materia Medica is something entirely different, and that real success can be gained only by the careful, dry study of symptoms. This is the reason why a large number of Homœopathic physicians, now practicing in Germany, are not in the position to make a scientific propaganda for their method. They do not much exceed the enthusiastic laity in the defence of their views. But for this reason again our colleagues of the dominant school find no interest for a science in the public representatives of which they recognize mainly laymen or half-educated physicians.

In Germany it is the traditional duty of every Homœopathic physician to first acquire all general medical knowledge like all his professional colleagues, and after the close of his studies receive the permit to practice as a physician by a state examination. We are not sorry for this indirect way, as we thus gain the proof that we are scientifically educated physicians, if doubted by our opponents. A future time may perhaps give us separate institutions for clinical instruction, for until now we are still restricted to private studies for

a specifically Homœopathic education. There is only one clinical institution, aided by the state government, under the control of the Homœopathic Central Society in Leipsic, but this is much curtailed by the flourishing private clinic of Schwabe's pharmacy.

The hospital of the Central Society in Leipsic is successful, but has not been assisted by general interest.

Munich has a small Homœopathic hospital, under the supervision of Dr. Koeck, but this is not generally known.

Berlin has the funds for the erection of a hospital, but the society for its erection has not yet been granted the governmental permit, without which the undertaking cannot proceed. The government will not support Homœopathy in the near future, although many persons of high rank are its adherents. Only in the state of Wurtemberg the official physicians are compelled to acquire a general knowledge of Homœopathy.

Homœopathic literature in Germany is represented by one of the oldest existing Homœopathic periodicals: *Die Allgemeine Homœopatische Zeitungun Leipsic;* (2) *Die Zeitschrift des Vereins Berliner Homœopatischer Aerzte;* (3) *Archiv fuer Homœopathie,* founded by me; (4) *Die Leipziger Populaere Zeitschrift fuer Homœopathie;* (5) the publications of the "Hahnemannia" in Wurtemberg; and (6) Dr. Schlegel's *Wegweiser zur Gesundheix* in Thuebingen.

Of these periodicals, the first one has no programme any more, as it has three different editors. It also publishes, in the interests of a small circle, who congregated under the name of Epidemieological Society, which hopes to improve Homœopathy by the teachings of Dr. Weihe, who adds a number of sensitive nerve points to the symptoms of individual remedies, at the same time attempting to revive the old theories of Rademacher with regard to epidemic remedies.

The *Berliner Zeitschrift* tends to find a modern expression for the doctrines of Homœopathy, hoping to advance the latter by adding pathological and physiological views in the selection of the remedy.

The *Archiv* represents the older tendency of Homœopathy, the purely symptomic selection, and the use of high potencies. It is the only paper which cultivates international relations as much as possible. The other publications are written for the laity and are excellently edited, although their views cannot always be accepted, but they all show a decided aversion to concede to the physicians the

leadership of the party, for they, as laymen, consider the laymen supreme.

The pharmacies dispensing Homœopathic medicines exclusively are good and flourishing. Most all the German drug-stores have Homœopathic departments, and it must be admitted that the apothecaries who are celebrated for their conscientiousness also try their best in this somewhat heterodox territory. There are a few fanatics and immature youths who try to spite Homœopathy by preparing and dispensing Homœopathic drugs in a careless manner; but it must be emphasized that such dishonorable conduct is rare. I, therefore, advocate that Homœopathic physicians should cease to dispense medicines themselves. In Prussia, the physician can receive a permit by passing an examination; in other prominent states such a law does not exist. However, with this view of giving up the dispensing of medicines by physicians, I stand isolated with a very small number of friends, although we argue that for diplomatic reasons also we should not insist upon a right which we use exclusively, and which has caused the enmity of the entire drug trade. We should at once assist in an agitation for all physicians to prepare and dispense their own medicines, but we do not wish that this demand should apply to Homœopathic physicians only.

If we now recapitulate all that is to be said about the position of Homœopathy in Germany, it is that we are again at the beginning of a rising tendency. A younger generation with modern views and education has joined our party; individuals of all circles of society needing medical assistance show greater interest in the new method of the healing art, and even though it be the economical side of our treatment which rouses the interest of the general public, as, for instance, the shorter duration of disease and the greater cheapness of the medicines, this is sufficient to guarantee the gradual recognition which we deserve.

We Homœopathic physicians are scattered in all directions and are overworked; therefore, it cannot be expected for some time to come that Homœopathy in Germany will appear prominent upon the great battlefield of scientific labor, but also among us indications appear of an increased interest for a thorough investigation of our knowledge and for the good-will to join actively in the development of our school. But, above all, after a period of hopeless decline, we are inspired with the consciousness that we, as Homœopaths, need

not care whether we are acceptable to others, nor how we might make ourselves agreeable to them, but that we may expect to be asked for advice, for we consider ourselves the standard bearers of medical progress, so long as we remain true disciples of our Master, who held up to his contemporaries the warning and admonition: *Aude Sapere!*

Discussion.

The Chairman: This address will be discussed by Dr. Dake.

Dr. Dake: I want to say that I am exceedingly sorry that Dr. Villers was prevented from being here to read this paper himself. I had the pleasure of meeting him two years ago, and know that he would be a very interesting member in this Congress. We are glad to hear something of Homœopathy in that country; we are glad of these notes of progress and to be assured that our cause is living and growing there. A few years ago I made the acquaintance of a physician of our school who told me that the greatest trouble they had in Germany, and I believe in other European countries, has been the control of the surgical staff of the army. They like to dominate and they do dominate, and so Homœopathy has a poor chance to progress compared with what it has in America. They won't give them a charter; they cannot have a school of their own to educate men in their own way; they have to go through the mill of the Old School, with its autocratic methods, and hence are laboring under difficulties; and they have our sympathies.

Dr. Fisher, of Sydney, Australia: Very many of the older men, and at that time the most scientific men of Germany, were charmed with Homœopathy, for Hahnemann's language was strong, powerful, and good. At the Berlin University Homœopathy was flourishing. Chairs of Homœopathy were established even in Heidelberg. We are not allowed to establish colleges for ourselves; therefore Homœopathic colleges under that name are few, but I have just been travelling over Germany, and Homœopathy has not diminished. The Allopath adopts most of our views, though not under the name of Homœopathy. Every pharmacy in Germany and in Prussia is obliged to keep a Homœopathic department, under the supervision of the government. The book on therapeutics, published by Schwabe, of Leipsic, has done a great deal of good, and I am astonished it has not been translated into English; it gives every disease and its treatment, and has induced many to make further investigation into Homœopathy.

The Congress adjourned until the following morning at 10.30 A.M.

The Sections in Surgery and in Ophthalmology, Otology, and Laryngology held separate sessions at 3 P.M. and at 8 P.M., at which numerous valuable papers were presented and discussed. (See the reports on these subjects.)

THIRD DAY'S SESSION.

JUNE 1, 1893.

The Congress reconvened at 10.30 A.M. Chairman Mitchell presiding.

Upon motion, the hour of meeting for Friday morning was changed from 10.30 to 11.30.

THE CHAIRMAN: The Address of Dr. T. F. Allen, of New York city, on "The Selection of the Homœopathic Remedy," is now in order.

Dr. Allen addressed the Congress as follows:

ADDRESS.

THE SELECTION OF THE HOMŒOPATHIC REMEDY.

By Timothy Field Allen, M.D, New York, N. Y.

The method of selecting the Homœopathic remedy, promulgated by Hahnemann, required that the effects of the drug selected should correspond as closely as possible, both in number and in character, to those of the patient. This rule, requiring Homœopathists to study the totality of the symptoms of the patient, must certainly be regarded as a safe one in practice, and a rule which must, in many cases, be carefully followed; but, as Homœopathic therapeutics has developed and its practice extended, we see that this rule is usually disregarded, and that some who have endeavored to apply it, have abandoned the practice of Homœopathy, as too difficult or too laborious to be followed in ordinary prescribing, or have resorted to the use of polypharmacy.

The obstacles to the application of the rule requiring a totality of the symptoms should receive careful attention. They seem to be:

First. The exigencies of business. It is practically impossible for a physician to apply this rule and prescribe for many patients in a day. Even Hahnemann himself, it is said, was not only a careful prescriber, but usually a somewhat rapid prescriber, and it seems probable that he did not, in a majority of instances, apply this method. Since his time, it has been observed that the greatest prescribers our school has known have been very rapid prescribers. This was notably the case with the late Dr. Lippe, of Philadelphia, who is said to have been one of the most accurate as well as one of the most rapid prescribers in the world.

Second. The difficulty in applying Hahnemann's rule of totality is frequently noticed in the lack of a complete development of essential symptoms in individuals, especially in epidemics; and it often happens that the proper prescription in a given case must be based

upon additional symptoms observed in other somewhat similar cases of the prevailing type of disease.

Third. The difficulty in applying the totality is nowhere so much experienced as in the imperfection of our symptomatology, due partly to the fact that the provings are insufficient in number to develop a complete parallel to the case in hand, or to the fact that the provers have carelessly observed and imperfectly recorded their symptoms. Incomplete symptoms may be said to be the rule in our materia medica.

The above practical difficulties to the application of Hahnemann's rule should lead to a revision in methods of teaching, of study, and of the application of our materia medica. Fortunately, other methods are available for many cases, and must, sometimes, be resorted to. To these I briefly call your attention.

First. The *impressionist* method—for I can call it by no better name. A physician who has studied well the development of the pathogeneses of any drug, will obtain a more or less clear idea of its sphere of action, and of its peculiarities, which will produce an impression apart from the memorizing of individual symptoms. Thus, the study of the potashes produces a general impression of salts which give rise to depression and paralysis, without febrile excitement, with great sensitiveness to cold, a general impression of sharp pains, of catarrhal affections, and with secretions varying in quantity in the different salts rather than in character, etc. One who studies Aconite obtains a lasting impression of mental and physical distress, restlessness, sometimes with profound cardiac weakness, at other times with violent neuralgia, but always a picture of anxiety and distress; and so on, through the Materia Medica. These impressions of drugs, derived from a study of their provings or cases of poisoning, are of the greatest value, especially in the treatment of patients who cannot relate their symptoms, such as children, or insane people, or those in delirium; and a drug may be prescribed from such vivid impressions, even when the symptoms may not be known to correspond with those of the drug; sometimes, it seems as though a correspondence of isolated symptoms was a matter of very little consequence, so long as the general characteristic indications for the drug are present. Some of the most brilliant prescriptions I have ever known have been made by this method, and our knowledge of the sphere of the curative power of the drug may thereby be greatly

extended. It is a method to be used only by a master of our art, and if used carelessly it leads to disaster and failure.

A second method is the key-note system. A physician selects one, or two, prominent, distressing or peculiar symptoms in a patient, which he takes to be characteristic, and bases his prescription upon them. It may be, perhaps, a single symptom which suffices to indicate the remedy. This method, carelessly followed, will lead either to the removal, one by one, of the isolated symptoms, without any marked effect upon the totality of the symptoms, or, the selection is apt to be faulty, and the symptom taken as characteristic, or a key-note, proves not to be one about which cluster the majority of the patient's symptoms, or even of those of the drug; all this may lead to discouragement, and to the selection of different remedies for different symptoms, to alternation, or to polypharmacy.

Right here I would like to say a few words about the selection of keynotes, for it seems to me that sometimes this method judiciously applied may lead to most important results. Its proper application, however, depends, in my opinion, upon a thorough appreciation of the pathological nature of the disease from which the patient is suffering. This may sound heterodox, but I thoroughly believe that the relative value of symptoms can only be appreciated by a knowledge of the special pathology of the patient.

If you will permit me to illustrate, I will take the familiar examples of the Homœopathic treatment of epilepsy on the side of symptomatology and of chronic degeneration of the kidney from the point of view of pathology. In properly apprehending and classifying the symptoms for the cure of epilepsy, very small account should be made of the immediate symptoms of the paroxysm: to be sure, this explosion or fit enables one to make the diagnosis of epilepsy, and without these symptoms the disease could scarcely be diagnosticated; but really these symptoms are of little or no value in the selection of the Homœopathic remedy. Their development depends usually upon a more or less chronic cachexia which underlies and determines the disease. A condition of malnutrition or, if you will, of psoric taint which has been inherited or acquired, which may have been of slow development, which must be studied, and from which only will one be enabled to obtain indications for the remedy which will remove it. The Homœopathic physician who attempts to get his keynote from the character of the spasm will fail

as a rule to cure his patient, while it may happen that one or two prominent characteristics of the patient, derived from its cachexia, will enable a physician to select the curative remedy.

In chronic kidney disease we find also a history of ill-health preceding the development of the kidney trouble, but this condition becomes modified by the development of the kidney-lesion, owing to the fact that the disease of the kidney itself gives rise to a series of secondary modifications of health, which have nothing to with the prodromal symptoms which determine the development of this kidney lesion. A correct understanding of the kidney disease and of its effect upon the entire organism becomes necessary in order to separate, as far as possible, these later developments from the earlier determining and essential features of the diseased condition of the patient, which, alone, will furnish the characteristic symptoms from which to select the curative remedy, and one who bases his prescription upon these later developments from the kidney trouble, will only succeed in palliating his patient, because the essential disease determines the continuance of the original trouble.

This difficulty in selecting characteristic symptoms is not infrequently observed in the treatment of violent or acute diseases, especially zymotic diseases.

I presume it will be accepted by most of my hearers that persons in vigorous health, whose vitality is high, whose tissues are well nourished, and, in consequence, whose resistance to disease is at the maximum, will rarely, if ever, contract contagious or miasmatic diseases. These germs, which are ever about us, are ready to seize upon individuals of a lower condition of vitality, and which will attack and flourish in a vitiated constitution, can be expelled from the system only by the restoration of the system to its normal condition of resistance. So that, it is clear, that in some cases at least we must, in order to arrest the progress of the disease, look beyond the immediate development of the symptoms of the acute disorder to the underlying and predetermining ill-health of the patient, and seek therein the characteristics which must determine the selection of the remedy, and the physician to be successful must, for a time at least, cease the attempt to palliate the immediate distressing symptoms by the administration of the curative remedy.

These and other considerations which might be mentioned, did time permit, lead me to the belief that reliance upon a single symp-

tom, or even upon a few isolated symptoms, is apt to lead the prescriber into discouragement, and while it must be admitted that single, distressing symptoms must at times be prescribed for, in order to give relief to the patient (parenthetically, it may be remarked that the greatness of the Homœopathic law is illustrated by the fact that it enables one to relieve distressing manifestations of diseases without being able radically to cure apparently hopeless and incurable diseases), yet we are obliged to deprecate the habitual selection of supposed keynotes or characteristic symptoms as a basis for a proper Homœopathic prescription.

The third method which may be resorted to is the method of Bœnninghausen, which was evidently appreciated and used by Hahnemann himself, and which has stood the test of a great many careful prescribers from that time to the present. It consists essentially in the selection from the symptoms of the patient and from the symptoms of the drug of the *elements* of symptoms, rather than of the symptoms themselves. It may be said that a complete symptom should consist of a sensation, a locality and a modality (or condition of aggravation or amelioration), and it is noticed in the study of drugs, as well, indeed, as in the study of the symptoms of patients, that certain sensations, like cuttings or tearings, are apt to appear in various parts of the body, and are apt to appear in various provers, sometimes becoming quite a characteristic feature of the provings of any given drug. The same thing may also be said of locality. Many drugs have their favorite localities in which symptoms of various sorts are apt to develop, and this remark is still more applicable to modalities. Drugs have their peculiar times or other conditions of aggravation or amelioration, and the modalities of a patient are very apt to be constant, not only for one sensation and locality, but for all sensations and for all localities affected. Thus, a Bryonia patient complains of being made worse by motion in every part. Lycopodium symptoms are very apt to occur at 4 o'clock in the afternoon, whether there be pains in the hips or distress in the stomach or febrile excitement. The Nux vomica patients are worse in the morning and directly after eating; the Sulphur patients are worse at night—all sorts of things are worse at night, etc.

Illustrations might be multiplied, but students of Materia Medica are sufficiently well aware of these facts, and it is unnecessary to

dwell upon them. Bœnninghausen states that the Materia Medica ought to be studied in this way; that the prevailing modalities should be noted, and also the prevailing sensations and localities. But he complains, as we all have complained, that the symptoms are imperfectly recorded, and in many cases the provings are so insufficient in number that our fragmentary knowledge must be supplemented by clinical observation, and asserts that many of the imperfectly recorded symptoms may be filled out by clinical observations of the curative effects of the remedy. He therefore combines therapeutics with the Materia Medica in his "Pocket-book." He then studies the patient from this three-fold point of view, obtaining the chief modalities, sensations and locations, recombining them in a drug which has the prominent features of all three essentials; thus, for a tearing pain in the left hip, aggravated during rest, he would select Lycopodium, not because Lycopodium has ever developed such a symptom in its provers, for it never has; but because it ought to, and doubtless will in some future prover, because Lycopodium produces prominently "tearing pains" in various parts of the body, it affects the left hip most prominently, and its general symptoms are mostly relieved by motion; therefore, he recombines these three essentials of Lycopodium and manufactures a new symptom for Lycopodium. This removes the sciatica, it may be, and secures a new, verified, clinical symptom.

We must all acknowledge that in the present incomplete condition of our Materia Medica, and for many years to come, perhaps for generations, clinical experience must be a decided factor in our therapeutics, especially when based upon well-recognized Homœopathic principles. I say "Homœopathic," because it seems to me perfectly fair and legitimate to study drugs according to Bœnninghausen's methods, and to supplement our fragmentary knowledge by our clinical experience and observations.

This is a matter for an interesting discussion, and to which, it seems to me, time can profitably be devoted; namely, how far we are justified in taking the elements of our symptomatology instead of the fully developed symptoms themselves, and prescribe from these elements with the almost certain assurance that complete provings will develop the missing symptoms of the drug.

Discussion.

The Chairman: Dr. Conrad Wesselhoeft will discuss this paper.

Dr. Wesselhoeft: *Mr. President, Ladies and Gentlemen:* Discussion means criticism. Some people think that criticism means fault-finding. It is nothing of the kind. If, therefore, I discuss this paper it is merely to say that I have nothing to add to it, nothing to take from it, but to express my full accord with it and the way in which it was written. It is a paper which well deserves reading over carefully. It is the *multum in parvo.* It embraces all the most important principles involved in our selection of remedies. I hope that when it is printed you will all study it carefully for you will find a great deal more in it than you can possibly catch in the rapid delivery necessary here. If I say anything about it it will merely be to supplement and explain, perhaps, a few points of the paper. We attach, in our selection of a remedy, too much importance to the words used by the prover. I never read through a proving in my life that I did not see the difficulty of understanding exactly what the prover meant, especially if I had been fortunate enough to have proved the medicine myself. I then saw the enormous difficulty in expressing exactly the same thing. I might have felt the same thing, others might have felt it, but the words which express it are very inadequate to convey the actual meaning and it is very difficult to do so. Something may be expressed in a variety of words used by the English or any other language, and I think that all of us, when we select a remedy, do so by an intuitive knowledge of it, that we acquire by reading not only the words but the meaning between the lines. We sympathize with the prover and put ourselves in his place, as we do in the place of the patient sick in bed. We doctors do not always get credit for feeling a great deal of sympathy, and the doctor who weeps over his patient has the credit of being very sympathetic, while one who listens attentively to the patient is said to be inattentive and unsympathetic when he is, perhaps, the most sympathetic, because he is digesting what the patient says, and feeling in his own life the sickness of the patient, and interpreting it with regard to the Materia Medica. Our knowleege then, of the Materia Medica and our ways of selecting medicine are often intuitive and not fairly expressed in words; hence, as Dr. Allen says, rapid prescribing is that intuitive prescribing which arises from a clear conception and sympathy with not only the words of the book, but the meaning of the remedy applied to the case. I do not believe I can make myself perfectly understood to you, especially to the younger members; but those who have puzzled over cases must have felt that rapid prescribing is often intuitive and not to be explained in words. At the same time I do not want to encourage it. I do not want to say that it is the proper way to do. It is best to be

very careful about it and not allow our intuitions to run away with us. Intuition should not take the emotional form entirely; it should be governed by reason and intellect in the end, and for that we have no better means than the study of the words of the provings. This is merely with regard to rapid prescribing. In regard to keynotes it applies to that and is intended to cover that ground and to supplement something of Dr. Allen's paper in which I concur most fully.

A word more about Bœnninghausen's *Repertory*. People say to me often, "What do you think of it?" I have known it ever since I was a boy. It has been in our family long before I studied medicine. I value it as highly as I ever did, and I value it all the more because I now understand it. I see its uses, and its faults. The faults are, as Dr. Allen has told you, in the imperfections of the Materia Medica; not in the principles upon which the book was composed and written. I think the principle underlying the method of arrangement of the book is one of the best if not the best in our Homœopathic literature. He gives generalities. He leaves out details, as Dr. Allen has told you, and as you know by the book—as you are acquainted with it. He gives you conditions and aggravations; the time, place, condition, under which aggravations take place. Those are very important things. Those are the very things which come intuitively in our selection of a remedy, and which if taken into consideration, allow us to make rapid prescription. But the faults of the book lie in the imperfections of the Materia Medica.

Bœnninghausen has a very valuable preface to that book which every one should read. I had the book in my office for years before I ever read the preface to it and I made a great mistake. Although Bœnninghausen recognizes the incompleteness of the Materia Medica, he did not know exactly where the incompleteness was, nor exactly how to get over it. He considered a great many things in it as facts which to us, to-day, do not appear. We cannot demonstrate them as facts. For instance, he will say in one place—I cannot find a very good example but I will make one for illustration—say, Pulsatilla, or the symptoms of aggravation at night. He will give half a page of medicines printed in different types, some emphasized by black types and other forms, indicating his preference for certain medicines or for aggravations at night. You turn over the book and you stumble across that same list of medicines under the head of "improvements in the morning." That occurs very often. It is a deduction and general conclusion of his, which does not arise from the Materia Medica, but which are merely conclusions which he thinks he is warranted in making, *i.e.*, aggravations at night must have improvement in the morning. It doesn't follow at all. Look it over in the Materia Medica and you will find it difficult yourself. That is an imperfection in the book which is misleading, and those who take books as inspired and unalterable make a mistake. There

is nothing absolute in our knowledge of Materia Medica and I hope in the futnre editions of Bœnninghausen the Materia Medica will be more carefully sifted before medicines are printed with capitals, and italics, and common types, to give the reader the impression that these are absolute medicines and that there is no doubt about the value of these symptoms. Those are the imperfections of the book arising from imperfections of the Materia Medica and too great faith in the result of provings which are imperfect.

I merely want to call your attention and make a plea in a few words for the method of finding out how the value of provings should be determined. One swallow does not make a summer, one proving by one prover is almost worthless except to him who has a great deal of knowledge on the subject. The principle of modern science is, that to determine a fact and get at the root of a thing a great many observations must be made. The result of these observations must be compared, whether it is in mechanical science, electrical science, engineering science, in physiology or in anatomy. Numerous facts must be brought up before anybody can attach the slightest importance to them. Fifty years ago one fact stated positively by one man was a law. That method is played out. We have got to have provings by a good many intelligent persons, and these must be compared, and with the greatest care; that which is incongruous set aside in preference to that in which the provings agree. That is the method which I wish to impress upon you. The words of a proving may be the same, and yet mean different things; but by that intuitive knowledge which we acquire by a long practice of reading provings, as well as by studying our patients, we may find them of great service.

The Chairman: The address will be further discussed by Dr. A. W. Hinman, of Dundee, Illinois.

Dr. Hinman: *Ladies and Gentlemen:* When such a gentleman as Dr. Allen comes before us and makes the statement that we have incomplete provings, it is evident to me that there is something wrong. There have been times in my practice that I have asked myself: "Do I know? Is there a certainty that I am using the best means for my patients?" Then when Dr. Wesselhoeft says nothing to the contrary, and we find it a fact, doesn't it seem that we ought to do something to remedy this deficiency? Isn't there some way by which we can have our remedies reproved and brought up to a standard of certainty from some scientific standpoint? It seems to me that we are wasting time, and if Samuel Hahnemann were here to-day, he would say, "Gentlemen, what in the world are you doing?" We could not erect a monument to Samuel Hahnemann that would be more telling than to get right down and have a corps of men here who are steadily proving remedies that should become authoritative—that we could stand upon. It would be cor-

roborative of what Hahnemann has done. For the Lord's sake let's do something. Let's go into our pockets and get a corps of men. We have to pay men to work in these days. They don't work in the same way Samuel Hahnemann did. He worked for the love he had in it. He had something to work at, and the mass of us cannot afford to work the way he did. He was a trained observer. We want men that are trained, and that will become more and more trained as they work at it. It seems to me that something could be done in this matter. We have seven hundred or eight hundred physicians here recorded, and the basis of their work is the Materia Medica. I don't care what ology they belong to, or what particular department; they are prescribing every day and depending on this thing, and still there is something that is incomplete. Let us eradicate that thing, and get down to some basis where we can say it is a certainty as far as possible.

THE CHAIRMAN: Dr. Allen will close the discussion.

Dr. ALLEN: Mr. Chairman, I am glad of the opportunity of saying an additional word, partly in the line of the gentleman who has just spoken, for he has woke us up. I want to ask this question of you all: What are you doing about Materia Medica? Are you working, or are you playing billiards or doing surgery or some other sort of specialty besides materia medica? Every member of the Homœopathic School is a specialist in Homœopathy and in Therapeutics, but I doubt if one physician in a hundred in this country does any systematic work in Materia Medica. The workers in Materia Medica are so very few we can count them on our fingers, and you howl at us for not giving you a perfect Materia Medica. You can't have it in a thousand years. It is impossible. What you must do is to study, and you don't do it. Now I am scolding. If every one of you men and women would take an hour or half an hour or fifteen minutes a day, and take the *Cyclopædia of Drug Pathogenesy*, and go through one proving after another, and take a few minutes at any conclusion of Symptomatology which is reliable like the *Cyclopædia*, and mark down those three points, you would be doing something. Select a drug, and study that till you get through with it. Do you know anything about Eupian, which the gentleman spoke about? and I was delighted to hear it, for I was waiting to hear of that. Read that through, and mark down if there are any conditions of aggravation at night; mark down those three points which Bœnninghausen emphasized. That is the way I have to do it. I have a little card which I can carry in my pocket, and I note, "Conditions, so and so, with such and such pains; burning pains in such and such localities." I have that in my mind, and I am ready for the patient that Eupian belongs to, and the next week take something else and do it; but, for Heaven's sake, do some work! Why it seems to me as though members of the American Institute

and the Homœopathic School just waited for half a dozen of us to cut up your food and put it into your mouths. That won't do. You owe a little more than that to your patients. You make your living and reputation out of it; so do some work in it!

THE CHAIRMAN: The next business in order is an address upon "Homœopathy and Public Health," by R. Ludlam, M.D., of Chicago.

Dr. Ludlam addressed the Congress as follows:

ADDRESS.

HOMŒOPATHY AND THE PUBLIC HEALTH.

By R. Ludlam, M.D., Vice-Chairman of the World's Homœopathic Congress.

The public health is the counterpart of the commonwealth. That a system of medicine which has sustained itself independently and grown in a compound ratio for a hundred years; which has its own literature and its schools, its clinics, societies, and hospitals, as well as its pupils and practitioners in every civilized community, is closely related to the health of the people is self-evident. To doubt this proposition would be like questioning whether Protestantism is related to Christianity, charity to benevolence, or the sunlight to the evolution of plants and flowers. If its recognition were commensurate with its deserts, and if its representatives had not been the victims of a class-bias that so far as possible has excluded them from the army and the navy, the hospitals and the eleemosynary institutions of this and of other lands, I should have a more grateful theme and a better prospect of pleasing you in what I have to say on this occasion.

Toleration has been defined as "the dogma of the weaker party." If the reformer did not insist upon it, he would never have a hearing. When he comes to be tolerated within certain galling limits, he has already gained a foothold. From that time forward his success will depend upon the merit of his cause, his own and his comrades' tact and persistency, and the conduct of its followers when its claims have received the popular endorsement.

I shall speak upon this latter point, for the "incomputable perils of success," as Lowell styles them, are not the least among those which beset our school of medicine at the present time. Our cause was a good one; there was need for a change in the harsh and harmful methods of treatment that were in vogue in Hahnemann's time. He

was a man of science, as science went in those days, but, what was infinitely more important, he was imbued with the spirit of scientific doubt. He saw the defects of the ancient system, and set to work to remedy them. To gain a hearing he must be aggressive. He characterized certain therapeutical abuses in such a way that some of his phrases fit and stick like the nicknames that schoolboys give each other. He had the faith and firmness which are moral weapons of an invincible sort. With a just and benevolent cause, he felt it no crime to be a dissenter from the established church in medicine. He knew that "while the animosities are mortal the humanities are eternal," and so, through a terrible opposition, he went forward in his chosen work. The merit of his cause is conceded and confirmed by thousands of physicians and by millions of patients in our day. If "the sweetest happiness that we ever know, the very wine of human life, comes from sacrifice,—from the effort to make others happy," what shall we not say for our hero who, greater than Columbus, opened up a new world in therapeutics.

"Necessity," says Herder, "is the clock-weight that keeps all the wheels in motion." The early followers of Hahnemann were forced to be on the alert to defend their cause, and at the same time to develop its resources. Its great qualities and small defects had to be looked after as one would take care of a legacy. It was a legacy, but not for an individual, or even for a family. It was a bequest for the benefit of humanity at large, and for the public health and welfare. The abuse poured upon the early Homœopathists, like that which was showered upon the early ovariotomists, is fast becoming ancient history. It is so much easier to accuse than to excuse them that the fashion is to revive the old bitterness whenever their methods or their writings are mentioned. We forget that, being placed on a frontier post of medical knowledge, they must hold their ground, and, if need be, fight in its defence. Beset by furious and unscrupulous critics, they were forced to charge their ink with gunpowder. In those days the controversial papers and the professional intercourse of parties on both sides abounded in brotherly throat-cutting. Almost every doctor, regular, irregular, and defective, insisted upon giving his neighbor "a piece of his mind," notwithstanding the fact that nobody had any peace of mind. Old doctors and medical students especially looked at Homœopathy through the prism of their own prejudices. The medical journals became, like

Punch, "a refuge for destitute wit," and almost every Old-School medical society took up the contemptible business of running a partisan search-light for the detection and discipline of heretics.

Under these circumstances, when their belief had to be kept up as a police force, it is no marvel that our brethren did and said some very unwise things. Like the lower brain centres that never sleep, they had always to be vigilant, even at the expense of being sometimes vindictive. And some one has said that everybody has a little speck of fight underneath his peace and good-will which he keeps for revolutions and great emergencies. In such a medical upheaval one must either fight for the supremacy of a faction or for a principle, and in this case it was not merely a matter of medical labels and liveries, but of deciding so important a question as the best means of relieving human suffering and of curing disease.

How well our predecessors did their work; what kind of fibre was in their faith, and how they defended it; how, as time went on, they were emancipated from controversy and left to cultivate their views and their peculiar resources; how the medical world, or the best part of it, has learned to treat them with a decent spirit of toleration that has finally soaked through the old rocks of prejudice, are matters of common knowledge in our day. As their antagonisms faded their resources were economized; as the radical and uncompromising spirit was torn down, the clinical quality took its place in their affections, their teachings, and their practice.

After the enthusiasm with which each discovery is received come the difficulties of application, doubts, and reactions. It is a false philosophy which thinks more of methods than of results, as it is a spurious Christianity which puts a creed concerning the insoluble matters of faith above the mutual duties and interests of mankind.

I think it was Goethe who said that "whatever emancipates our minds without giving us the mastery of ourselves is destructive." We are no longer engaged in an uncertain contest. Faith and works, and fighting and waiting, have secured us a hearing, an opportunity, position, and popularity. But there is the rub. Considering what the outcome of all sorts of antagonisms, moral and medical, has been; that those who gain power and influence almost always become intolerant and thereby cripple their cause and compromise their position; and considering that doctors are subject to the same infirmities

as statesmen, soldiers, and politicians; that, in this instance especially, the interests at stake are of vital consequence to the welfare of mankind, why should we not cultivate a larger measure of professional toleration? Surely we are unfit for such an endowment if we fail to appreciate the responsibility that it brings, or to make the best possible use of it toward keeping our place in the line of the liberal professions.

In the far-away Northwest they sometimes have hail-storms that thresh the grain in the field just before the harvest. There are some over-zealous disciples who act like a Dakota "twister" when it comes a few days too soon for the unlucky farmer. They have a passion for a label that amounts to an infirmity. Like a vulgar relation in good society, they invariably say the right thing at the wrong time; fancy that they are still living in a debatable and not in a progressive age; are always looking for the routes and resorts of an enemy; and cannot understand why the asperities of medicine should yield to the mellowing influence of time more rapidly than those of theology have done. You remember the old saying that "an honest man who lacks judgment is more dangerous that a thief who has discretion;" for so long as you watch the discreet wretch he cannot injure you, while there is no escape from the fool friend.

In the glorious emergency in which we are placed, there are duties that draw like the invisible chains of gravitation. These duties pertain to our fitness and qualification as physicians, and to our tolerance of those whose professional views and opinions differ from our own. The greatly improved facilities for obtaining a sound and thorough medical education are filling the first of these requirements in a most satisfactory manner; while the dissipation of the fog and mist of distance and Pharisaism among the fraternity is doing the rest.

It is true that in certain quarters we still are the victims of class-bias and of class-legislation. For there are those who continue to regard the representatives of the New School of practice with a muffled animosity against which our only shelter is the satisfaction of being in the right. But what concerns us and those that believe with us, is of such exquisite importance and interest that whatever the provocation we cannot afford to quarrel with them any longer merely for the *theoretical* defense of our faith. We must use our own *clinical* spade, and we cannot answer for what will turn up. If some

of the old roots of error, tradition, envy and unreason are thrown out of the medical field altogether, so much the better for the coming doctors and their patients, for our literature, and for the general reputation of what used to be styled, and should really become a *liberal* profession.

The position of Homœopathy in our charitable institutions is not what it would have been but for the opposition that it has encountered from those who assume to monopolize all medical knowledge. Nor is it what it will become if we are fit and worthy for the places and the responsibilities that are rapidly falling into our hands as a simple matter of right and of justice.

From those who will follow me with special reports, you will have the detailed proof of this growing freedom of medical opinion. You will gather the most encouraging facts, showing that those who had dug a moat around our school of medicine to shut it in to itself, and to shut it off from all practical relation to the public health, have signally failed. The whole world of thought and action is permeated, but not saturated, with the principle of tolerance, and if we continue to watch and pray, to work and wait, a full share of recognition will yet be accorded to us. For it is a lucky thing that the universal law of change can so modify our views of liberty and of justice that the right may finally triumph. The powers that be are a shifting quantity, and this is an age of progress.

The repression of thought and the stifling of medical investigation, except on certain prescribed lines, is an antiquated abuse against which the spirit of this age is in open revolt. There is no toleration in holding those who differ from us in contempt; but there is an under-current of sympathy with what is new and noble, magnanimous and merciful, of which we can take advantage. We have had a cycle, or better, perhaps, a cyclone, of that intellectual agitation which is the first step towards reform ; and now, if our professional views are not twisted, or too narrow, if we do not in turn become intolerant and egotistical ; if we can learn to forget all but the ultimate end of our mission to mankind, and take advantage of the ripening harvest, there is no reason why all that is good and true in Homœopathy should not be fully appreciated by the public at large as well as by the profession.

The three factors in the stupendous reform that Homœopathy has wrought were its intrinsic and relative utility ; the faith and fidelity

of its early apostles; and the persistent political intrigue of its opponents, which was the daily bread of the inquisition. It is enough to say that from the foundation of the world these are the precise conditions upon which every reform that was worthy of the name has depended for its evolution and establishment.

Although the persecution that we have suffered in times past has been a grievous burden, and has sometimes put us at a great disadvantage, it really has been a blessing in disguise. For while, as every Christian must know, the professional disabilities to which we have been subjected were indefensible at the bar of the Golden Rule, they were indispensable to our sturdy growth and development. The winds of opposition have rooted our tree of knowledge. Left to our own resources, we were compelled to do our best for our patients, and for our branch of the healing art, at all points of the medical compass. Hence the all-around growth of our school and the impossibility, except here and there, that we should become and remain mere fanciful and fractional doctors.

Show us a form of quackery that can stand the clinical test of object lessons in all the practical branches of medicine and surgery, every day in the year, and before thousands of earnest and intelligent pupils and physicians; or one that has ever done first-class work in surgery, or in any of the specialties. They have not even given the world that modern product of spontaneous generation, a decent gynæcologist!

But this Congress in which we are met comprises a host of representative men and women, who in many lands work as teachers, authors and practitioners in every department of the medical calling; whose scientific attainments and professional probity, scope, popularity and usefulness are equal to those of a like number of physicians from any other school of practice. Judged by this standard and by the fruit of their labor, as it is preserved in our literature and noted by the Recording Angel, we surely do not deserve to be classed as outlaws and charlatans.

Twenty-three years ago, and within a stone's throw of this spot, an address was made before our National Society which, in the light of recent development, reads like a prophecy. It sounded a clear note from the warm and royal spirit of our dear, departed friend, Dr. Carroll Dunham. *Liberty of medical opinion and action; a vital necessity and a great responsibility*, was a theme that was worthy of the speaker and of his cause.

As the one man among us best fitted to appreciate the peculiar position in which we were about to be placed; whose love for humanity and for his own calling was boundless; whose loyalty could not be questioned; whose regard for the opinions of others was always respectful and generous, giving every one credit for the good that was in him; whose faith was firm and steady, not fickle and foolish; whose opinion was worth more than anybody else's argument; whose writings are neither fierce and feeble, nor shallow and worthless. The text of that discourse reads like the Sermon on the Mount.

"The time, then, is passed which called for defenses and expositions of Homœopathy, appeals for equal privileges and protests against oppression. We stand henceforth on equal ground as members of the great body of the medical profession, in which we shall take rank *according to the worth of our work* in the broad field of medical science."

After a clear statement of his individual position on points of doctrine that were mooted then, are now, and always will be, he says:

"Notwithstanding this belief, I advocate entire liberty of opinion and practice. Nay, *because* of this belief, I plead for liberty; for I am sure that perfect liberty will the sooner bring knowledge of the truth and that purity of practice which we all desire.

"So long as we are a body of physicians characterized by a distinctive name derived from the law of cure which we profess, I suppose that none will seek membership in the Institute who do not substantially accept the law. This granted, I would have no exclusive creed, no restrictions relating to theory and practice, but would receive into membership of the Institute every applicant of suitable educational and moral standing. I deprecate any attempt to regulate or prescribe the opinion and practice of members of our school, for two principal reasons. We *cannot* do it if we *would*, and we *ought* not if we could.

"We *cannot*. We are not a body claiming to possess infallibility. It belongs not to us to utter denunciations of what we may believe to be errors of faith and practice; nor to put forth an index of the allowed and the forbidden. We are a voluntary association of laborers, simply from the love of knowledge, as is the case with all workers in science; and we have no power to enforce any restrictions upon which we might determine.

"We *ought not*. Not until we have reached the absolute truth should we be justified in establishing a standard of faith and practice. How far we are from that position need not be argued here. Let us remember the wise course of the Bureau of the Paris Hospitals, when, in 1850, Tessier of St. Marguerite, made known his conversion to Homœopathy, and it was proposed to deprive him, on that account, of his position as hospital physician. The wise Chomel opposed the proposition, saying that every physician, who is thoroughly qualified to practice has the right to select his own mode of treatment and to judge what is best for his patients, and may not be interfered with, unless his results are notoriously bad or he commit some

act of unquestionable malpractice. 'For,' said he, 'It is only by the exercise of this freedom that changes and improvements have ever been introduced in practice; and herein lies the only hope of further improvements. Tessier, in practicing Homœopathy, has only exercised the same freedom of selection which Bouillaud and Rayer and Louis and I have enjoyed and, as his results are as good as ours, we may not interfere with him.' . . . .

"Do we demand liberty of opinion? Then must we take care that our opinions rest on a foundation of study and acquirement which embraces the entire circuit of medical knowledge, and takes in and honestly estimates every new contribution to it, no prejudice of place or person giving a bias to our reason. Then must we act in the spirit of Hahnemann's noble admonition: 'In a science in which the welfare of mankind is concerned, any neglect to make ourselves masters of it becomes a crime.' . . . .

"But touching the open questions of medical opinion and practice—while each of us earnestly proclaims the opinions he has espoused, and zealously puts them in practice, let us cultivate the catholic and noble spirit of Chillingworth: 'I will take no man's liberty of judgment from him, nor shall any man take mine from me. I will think no man the worse man.' . . . . I will love no man the less for differing in opinion from me, and what measure I mete to others I expect from them again.'"

In the light of his leadership and wise counsel; in the light of what we have learned since he left this legacy; and because of the great and growing influence of our branch of the healing art, I plead for toleration; for increased breadth of culture and acquirement; for the careful fostering of the specialties; and for the thorough and adequate fitness of our physicians for their all-around duties and responsibilities. These are the industrial conditions of success and stability; and if properly and persistently applied they will surely demonstrate the vital relation that exists between Homœopathy and the public health.

THE CHAIRMAN: The discussion on this address will be opened by Dr. I. T. Talbot, of Boston.

DR. TALBOT: When I was asked to speak upon the subject which has just been presented to you, I did not feel certain what there was to say, or what the direct line of argument in that paper would be, but as it went on there came so many thoughts that I feel myself equally incompetent to arrange them in the way that they should be to such an audience; but the name of Carroll Dunham and the memories of twenty-three years ago certainly thrills the heart of every one who was present at that time, who was a member of the American Institute of Homœopathy, or who had an interest in this subject. It was at a time when there were those who thought that they were right and all the rest were wrong, and, in fact, there

is that element in the human mind that thinks our thought must be right and everything that is different from it must be wrong; but it is going further than that to draw lines, to draw a creed, to draw those stringent bands around the Homœopathic profession which should define a certain line outside of which they should not go; and it was the work of that one man, so noble, so broad, so exact, so painstaking in all his work, who never could be doubted of loyalty to Homœopathy, that in that address, placed us on the platform that has given us progress, additions to our members and a liberty to go on in the work in which we are engaged. Now we feel that influence.

Our present position is also a somewhat dangerous one. When we were excluded from public institutions there was no danger of our committing any great offences, but the day is fast approaching, and has already come, when we are not only admitted but invited; and are we ready for it? Have we given that attention to the great work of public health, that as a body we should? We cure our patients, we devote our time to them and it is a great work, but there is something even more extensive than merely attending to the one individual case, or the few that may come to us. The whole mass of humanity is influenced by certain conditions which it is our duty as Homœopathic physicians to meet, to maintain the public health. We have already representatives on boards of health who do good work, and they will be on other boards, and in every state in this union we must have men and women prepared to do duty in the matter of caring for the public health.

One other point I wish to speak on—our public institutions. There are, as you know, in Massachusetts, in New York, in Michigan, in Minnesota, and in California, institutions for the care of the insane. In the establishment of the institution in Massachusetts with which I happen to be connected it was a difficult matter to find a man in the United States at liberty who would come to the work. That was eight years ago. It is true we did find one who did wonderfully well but the same difficulty accompanies every such State institution that is established. Now it is for us to cultivate men and women who can take such positions when they are presented, and so be prepared to show that the Homœopathic profession has been so trained for it, that at any time they may be prepared to take up and carry on these public works with credit to themselves and advantage to the whole community. The subject of public health is one so broad that we could also discuss it, and I am sure there are others who will have a word to say upon it, and give us an encouraging word in meeting the duties that are to come upon us.

THE CHAIRMAN: Further discussion will be by Dr. McClelland.

DR. MCCLELLAND: I had no idea of saying anything upon this subject this morning: but of course I take the interest which all of

you do, in any of the ethical questions that were brought before the Congress by the address of Dr. Ludlam. It is a finished and scholarly paper, touching upon questions that should occupy the attention of our physicians; they demand our greatest care and solicitude. The ethical questions are of importance, as for example, the suggestions therein contained as to the attitude which we should occupy toward the general practice of medicine. It is true that there is danger that we may beome the intolerant party. It has been made manifest to every one that the Old School of practice has modified its position very much of late years. We may say that we have won our position. It is also true that the younger men of the Old-School profession have no such feeling toward ourselves as that which animated their elders thirty or fifty years ago. Now while I say, and firmly take the position, that we should not lightly give up our attitude as a distinct school—that we should not sell out our birthright for a mess of pottage; still it is true that we should recognize the fact that the Old-School physicians are making an effort in the same line as ourselves.

Now, one of the lines in which the schools come together ethically and otherwise, is that of caring for the public health, and I can assure you that it is a broad field, and Dr. Talbot, in his remarks has called attention to a very vital question in connection therewith. Our patrons expect that their representatives shall take their places in serving the public health. Your patients and my patients say—"where is our doctor?" We hear of Dr. This, and Dr. That, looking after the general public welfare, but where is *our* doctor? Now, it behooves us to fit ourselves for the positions that are being actually thrust upon us. It behooves us to look into public questions and fit ourselves to occupy positions of public trust; for without doubt, we shall be asked to take our proper share in the exercise of public conscience in connection with the State.

THE CHAIRMAN: The debate will be further continued by Dr. Conrad Wesselhoeft, of Boston, speaking for Dr. Carl Bojanus, of Russia, who is unable to speak English.

DR. WESSELHOEFT: I have the honor to represent our venerated friend, but it will probably very imperfectly convey to you his ideas on the subject of predisposition of diseases in regard to public health. He handed me last night three pamphlets pertaining to that subject. They were all written as late as 1874, and relate to certain atmospheric influences on public health, and were written by one Dr. F. X. H. Horn, and at the time excited considerable interest, from the careful manner in which the subject was handled and the data adduced. I will give you, very briefly, only the upshot of the matter. It relates to the production of ozone and yodosmone as products of certain chemical conditions of the atmosphere, or which were then, and I think are now, attributed to conditions of the atmosphere.

The author goes on to show that the presence of ozone or yodosmone influences or predisposes nations and the people of the cities to diseases, particularly to the prevalence of cholera. These are broad statements, and may be based entirely on theoretical reasons which I cannot go into fully now; but when reading the pamphlets, I saw there was something in the subject which might influence everybody. Ozone is formed under the high electrical temperature. Yodosmone is formed in the presence of low electrical temperature. We all know that that exists. And one scientific experiment was carefully made to demonstrate the presence of these bodies or gases, or noxious miasmata, as they are called. The effects of ozone and yodosmone are to produce nitrogenous combinations. That may not be exactly true, but the facts remain true that certain electrical conditions of the atmosphere produce predisposition to disease. That was stated in 1847 or earlier.

To-day the great question comes up, What is the cause of cholera? We have all supposed it was the cholera bacillus, just as the bacillus of consumption produces consumption, etc.; but it is beginning to be understood more and more that something besides the bacillus and its chemical products is necessary to produce any disease, and that the thing which is necessary is a predisposition, without which no bacillus can have any decided effect. It finds no grounds upon which to lodge. That is a theory, to be sure, but a theory not entirely without foundation in observation. You all know of the wonderful controversy that has been going on with regard to predisposition. It has been maintained principally by a professor of Munich, who, to test this very fact—whether the cholera bacillus alone is capable of producing cholera, or whether this predisposition is necessary—obtained from Paris some of the cholera bacilli which were virulent and active, and demonstrated it by a great many careful experiments on animals that died from it. He, a man seventy-five years of age, risked his own life by swallowing thousands of these cholera microbes, and he is alive now. I think it is a very fair demonstration although many objections have been made—that the bacilli might not have been virulent, that they had not been properly tested before being swallowed—but there are not many of us who would undertake such a dangerous experiment, especially as Koch has asserted that the bacillus is present in every genuine case of cholera. The interesting papers which Dr. Bojanus has given me throw some light on the subject, showing under what conditions the public health may be so impaired and predisposed to general epidemics, and especially to cholera. That is the sum and substance of the subject upon which our venerable friend wanted to talk to you, and I have done as well as I could in his name, and beg your pardon if I have inadequately represented the subject.

THE CHAIRMAN: The next business in order is the reports from foreign delegates. As I have already said, our venerable friend, Dr. Carl Bojanus, of Samara, Russia, is unable to speak English. He presents his compliments to the Congress, and will make his report in writing upon Homœopathy in Russia. I have the pleasure of introducing Dr. Alfred E. Hawkes, of Liverpool, England, who will speak to you.

Dr. Hawkes addressed the Congress as follows:

ADDRESS.

HOMŒOPATHY IN GREAT BRITAIN.

By Alfred E. Hawkes, M.D., Liverpool, England.

In presenting to you a short statement of the position of Homœopathy in Great Britain at the present time, I must ask your forbearance, as I have no material at hand wherewith to refresh my memory. I may at the outset, state that the days are gone by when it is necessary in order to check the insolence of the President of the Royal College of Physicians towards our body, for the leader of it to challenge him to mortal combat as in Quin's time. They would be more likely to call now for China tea than coffee and pistols for two. The days, too, are gone by when a medical student for striving unsuccessfully to cure his relative of cholera, after having been given up by the Allopaths, would be thrown into Newgate, as was the case with Pearce. To be sure Pearce was speedily liberated when his case came before Mr. Justice Maule, but later on it required almost an Act of Parliament to rescue from the limbo of suppressed truths, the awkward facts that our results at the Homœopathic Hospital in London, during the cholera epidemic were better than those of our opponents, and too good to be published side by side, with them. And now with such men as Dudgeon, and Hughes, Dyce Brown, Hayward, and Pope, Knox, Shaw, Blackley, Burford, and Clarke, we have no official recognition as a body, and no school or hospital at which a single lecture would count. Do you wonder that I am compelled to say that notwithstanding the great energy of the Secretary of the British Homœopathic Society, the recruits are barely sufficient to fill the places rendered vacant by death.

With the cause of this I have nothing to do, but I should indeed be blind if after spending less than a week on this side of the Atlantic, I could not formulate a reason and suggest a remedy; but my suggestion would fall flat. For already some of those I have men-

tioned in the name of the general body, are firmly and in proper form demanding a status in the proposed new university of the capital for our system of therapeutics. I am compelled to admit that there are fewer professional followers of Hahnemann in Great Britain who would confess their allegiance, than in your City of Chicago; but many adopt the practice *sub rosa*. In the extreme North, there still lives Reith of Aberdeen, who discovered that his original contributions to the Edinburgh *Medical Journal*, were in fact admissions of the truth of Homœopathy, frankly declared himself on the side of those practicing that form of the medical art, and was so boycotted that he had to resign his post at the infirmary, or remain its sole medical officer, a position he was too wise to care to retain.

Bryce and Wolston, the latter of whom is a successful operator on post-nasal growths, ably represent us in Edinburgh, where Prof. Henderson, although a Homœopath, retained his position as a Professor of Pathology up to the time of his death, all attempts to dislodge him having failed.

The cause is flickering only at Glasgow. Across the channel at Dublin, Belfast, and possibly another place or two, we have able representatives.

If in South Wales there are two, we are better off than I think, and North Wales is destitute of a Homœopathic practitioner.

In the Southwest of England able men are dotted over Devon and neighboring counties.

We are strong at Bristol. Your old friend Clifton still holds the fort in the midland town of Northampton, with all the ability of which you know him to be possessed. He has one colleague. His brother at Leicester has more than one. In Birmingham we have Blake and Thomas and others, and the cause is strong. Chester has one practitioner, and many towns of fifty thousand inhabitants or more, and other towns of large size are worse off than that.

Able men are scattered over the broad acres of Yorkshire, and Newcastle is fairly strong. In Manchester the scientific attainments of C. H. Blackley are seconded by a few able colleagues.

In Liverpool, where for more than fifty years the slight but valiant frame of J. J. Drysdale held its sway, resisting all attempts at alluring him to the metropolis on the one hand, and all attempts to diminish his influence on the other, Homœopathy flourishes. Dur-

ing the twenty-one years I have practiced there, more than twenty able men have gone to other spheres of labor. For our House Surgeonship, with its salary of six hundred dollars per annum, attracts young men from all parts, and our stipendiary visiting posts, worth five hundred dollars per year, serve to attract good men and to help them through their early struggles.

Through the princely gift of Mr. Henry Tate we have a hospital which cost about one hundred and thirty thousand dollars, well equipped and with its fifty beds, much good work in general medicine, surgery, and ophthalmic surgery and other branches is done.

Dr. Drysdale and Dr. Moore were its consulting physicians up to the time of their lamented decease. The post is now held by Dr. Hayward.

Our dispensary officers see twelve hundred out-patients a week, besides visiting the poor at their own homes. Within the same walls our medical society, originated by Dr. Drysdale and three others some thirty-five years ago, meets about eight times a year, and does good work.

Our local chemists are men of science. Mr. Capper having almost a unique collection and knowledge of the lepidoptera, and Mr. Thompson being a specialist in marine fauna and the microscope.

At the present time a free bed in memory of Dr. Drysdale is being instituted at a cost of a thousand pounds, which sum is nearly raised. It was well for him that it was not the guillotine he had called into existence. Until his death Dr. Drysdale was a member of the Allopathic Medical Society, from which Dr. Skinner was excluded on becoming a Homœopath—bowing to the absolute rule he had been instrumental in initiating while still an Allopath. We are permitted to join the Gynæcological Society, but not the Obstetrical, and only one of our men—Dr. Sharp—ever held the blue ribbon of the Royal Society. Consulting practitioners are at all times obliged to choose on which side of the fence their centre of gravity must be located.

Thus we strive to hold our own. The signs of better things loom in the not distant future. We wait, but we labor. We hope but do not fear. We are buoyed up by being assured of your sympathies, and we grasp your hand, outstretched across the sea, and gladly absorb all the kind regard you have to spare.

THE CHAIRMAN: Connected with Homœopathy in England, Dr. Ludlam has a word to say from Dr. Dudgeon.

R. LUDLAM, M.D.: *Ladies and Gentlemen:* At the last meeting of the Congress, at Atlantic City, a vote was taken requesting Dr. Dudgeon, of London, a distinguished member of our School, to issue another edition of his translation of the *Organon* of Hahnemann. He has, with the faithfulness characteristic of him, finished that work and furnished the book, and I received it two days ago by post. He sends to this Congress the book, with this inscription: "To the World's Homœopathic Congress of 1893, with Respectful Greetings of the Translator, London, May 8, 1893." It gives me a great deal of pleasure to carry out his request that the volume be handed to the World's Congress of Homœopathy, and I therefore pass it to the President of the Congress.

THE CHAIRMAN: I have the pleasure of introducing Dr. P. C. Majumdar, of Calcutta, India, who represents two hundred millions of his countrymen.

Dr. Majumdar addressed the Congress as follows:

ADDRESS.

HISTORY OF HOMŒOPATHY IN INDIA.

By P. C. Majumdar, M.D., Calcutta, India.

Ladies and Gentlemen: Before going into the details of the progress of Homœopathy in India, I take this opportunity of speaking a few words about the state of the medical profession generally in that country before the advent of the Europeans. I purposely take this responsibility, as it has some bearing upon Homœopathy in India. You are all aware, gentlemen, that India is a very ancient and magnificent country. It had attained its highest state of civilization long prior to all the civilized countries of the world at the present day. It is therefore natural to infer that laws governing health and disease must have received a due share of attention at the hands of its people.

It was believed that Mohadwa, the great Hindu deity, was the promulgator of the science of medicine. He was dealing with the dead bodies and handling all sorts of deadliest poisons. The truth is, he was busy with examining the human frame and searching after the medical virtues of all substances. From him Dhannantori got his inspiration of medical science and practiced it for the preservation of the human race. There is a story in our books that on one occasion all the minor gods and goddesses were eager to become immortal, and for this purpose they were agitating the ocean to get Amrita, the principle of immortality. But instead of getting that, they procured Garal, the deadliest of poisons. Nobody ventured to accept it; Mohadwa came to their help; he turned that substance into Amrita by swallowing the poison, and became immortal. We Homœopaths can find out a great deal of truth in it. Mohadwa took the poison into his healthy body—"proved" it, as we say—and reduced it into the life-giving principle of medicine. We presume, however crude and unreliable this story may be, that the law of

Homœopathy which the immortal Hahnemann discovered so recently was known to our ancient sages in India. This very principle of *similia similibus* was also embodied in one of our ancient medical works in the following passage, that "poison is the cure for poison." How far my contention may be sustained I am not prepared to argue, but I am so far confident that our medical authority of ancient times had some idea of the Homœopathic law of cure. Even at the present time our native system of medicine is far better and far more efficacious in curing all varieties of chronic diseases than is that of our Allopathic physicians. Our native physicians, moreover, use very minute doses and are more successful than our brethren of the Allopathic School, with all their vaunted knowledge of science. Our medical science suffered a good deal of loss during the Mohammedan invasion in India. These turbulent people destroyed many of our valuable books in order to introduce their system of medicine, but it proved an utter failure.

Later on, our European physicians brought their own medical science with them. We are thankful to the modern spirit of investigation. By their surgical skill and appliances our Allopathic physicians made a good name and extended reputation, but their therapeutic measures are an utter failure. They, by the aid of the English government, establish medical colleges, hospitals and charitable dispensaries throughout the length and breadth of the country, and are doing some good to the people, but not to the entire satisfaction of the Indian community.

At this moment the Homœopathic system of treatment engages the attention of our people. People are convinced of the superiority of Homœopathic methods of cure in India through the exertion of lay medical practitioners; no qualified medical man at an early date deemed it worth while to study and practice it. It was a significant fact in the history of Homœopathy in India that one Dr. Honigberger, a German gentleman, came here to treat one of the princes of this country, whose case was declared hopeless by his physicians. I understand Honigberger gave juice of Dulcamara to the prince, and he was much improved. This is the first drop of Homœopathic medicine administered to our countrymen. However, since the departure of this physician there was no stir-up about Homœopathy till the year 1851, when Dr. Tonnere, a French physician, who proved Acalypha indica, the valuable medicine of phthisis pulmona-

lis, came to Calcutta and began practicing Homœopathy. He was a favorite of the officials in India; so, by the help of the Governor of Bengal, he established a Homœopathic hospital and charitable institution in Calcutta. Our wealthy and generous townsman, Baleu Rajendra Dutt, dissatisfied with the Allopathic treatment of cases, began studying Homœopathy. By his energy and the judicious prescriptions of Dr. Tonnere many cures had been effected. At this time we are told that some of the most fatal cases given up by the Allopathic physicians were beautifully managed by these gentlemen. This is the first planting of Homœopathy in this country. No regular physician of our country thought it necessary to inquire about the new system of cure.

Baleu Rajendra Dutt was a neighbor of Dr. Mohendra Lal Sircar, who was then a rising Allopathic physician. It was a curious fact that many of the given-up cases of Dr. Sircar were readily ameliorated and cured by Rajendra Dutt. This attracted the attention of Dr. Sircar, who, after studying for some time, was moved by the genuine superiority of Homœopathic methods of cure, and openly declared his conviction in 1867. Dr. Sircar's Allopathic friends and associates were much incensed at his conversion to Homœopathy, and he was ostracised from the Allopathic medical associations.

About the year 1865, Dr. Berigny, an eminent French Homœopath, came to Calcutta to practice Hahnemann's system of medicine. He was very successful in his profession but was not long to enjoy that reputation. A Homœopathic pharmacy was established at this time for dispensing medicine. In conjunction with Dr. Mohendra Lal Sircar and Baleu Rajendra Dutt, Dr. Berigny had done much towards the propagation of Homœopathy in India.

At this time Dr. Bihari Lal Bhaduri, a graduate of the Calcutta Medical College, came to the field. He was a studious and intelligent physician and it was, I believe, through the exertion of this gentleman that Homœopathy has gained a firm footing in India. I regret very much to say that we lost him at a comparatively early age of fifty years in March, 1891.

After observing some miraculous cures from Homœopathic medicines by Dr. Bhaduri, I came to study this method of cure. I graduated in the year 1878 and after studying Homœopathy under Dr. Bhaduri commenced practicing it in the year 1880.

My good friend Dr. Brojendra Nath Banez, who graduated in

the same year with me, commenced practicing in Allahabad, a town about five hundred miles from Calcutta. He practiced a few years as an Allopathic physician, and subsequently took to Homœopathy, and came down to Calcutta. He is an intelligent and energetic physician.

At this time many of our class friends are converted to Homœopathy. Among them I may mention the names of Drs. C. S. Kali, B. V. Maitra, P. N. Chatterji, and A. K. Datta. They are all very enthusiastic followers of Hahnemann.

Our good friend Dr. Giris Chandra Dutta, has done much to introduce Homœopathy among some of the rich people in Calcutta. He is an old graduate and I believe a class friend of Dr. Bhaduri. Homœopathy is so widely known at this time, namely, from the year 1880, that one of our countrymen, Dr. D. N. Ray, came to study Homœopathy at New York. He became a graduate of the New York Homœopathic Medical College and began practicing at Bombay. He subsequently removed to Calcutta and is doing good work there.

I forgot to mention the name of Dr. M. M. Bose, who came before Dr. Ray and graduated also from the New York Homœopathic Medical College. He is also a Homœopathic physician at Calcutta.

In Calcutta we have now about fourteen Homœopathic physicians and our works are extensive. But there is still a great difficulty in getting Homœopathic help in other parts of the country. There are some laymen practicing among the people there. In order to get rid of this difficulty I tried my best to educate some of our countrymen to Homœopathy and thus in the year 1883 I succeeded through the help of my friends Dr. M. M. Bose and Baleu S. B. Mukerp in establishing our Calcutta school of Homœopathy. Though this school is still in an elementary condition, yet much good has been accomplished by it in spreading our system of medicine. The students on the roll last year amounted to about one hundred. The students are required to study for three years here and after passing an examination, are supplied with certificates to practice. There are eight teachers in the school. Dr. D. N. Ray is the president and myself the secretary.

I am glad to bring to the notice of our friends of the World's Homœopathic Congress here that Homœopathy has gained a somewhat strong hold among our people at the present time. In proof

of this I may call your attention to the fact that within a year or two we got some public institutions; I mean two dispensaries and a hospital where poor patients get medical help. The Bhaduri Charitable Homœopathic Dispensary was established as a memorial to that gentleman after his death. Dr. Banerjee is the secretary of that institution. Since its establishment in June, 1892, up to February, 1893, eight thousand patients have received medical help and medicine. This dispensary has a branch in the crowded part of the city, under the supervision of Dr. B. V. Maitra and I am glad to say a greater number of patients were treated here. Dr. Maitra, moreover, deserves our best thanks, for here he used to supply all medicines himself. The dispensary is useful in other ways than giving medical help to the poor; the students of the Calcutta school of Homœopathy have the opportunity of attending here, and of learning how to prescribe and take up a case.

Subsequently to the establishment of this institution, a very rich and respectable gentleman, Sir Rajah Saurindra Mohan Tagore, established under the direct supervision of Dr. P. C. Majumdar, a Homœopathic dispensary in name and honor of his mother. There are two paid medical officers who prescribe and distribute medicines for the poor people gathered round them every morning. Deploring the neglect shown to Homœopathy by our rich class of people in India, the medical officer says that our best thanks are due to the generous Raja (prince, as he is styled by our government), as he is the pioneer of giving public help to our cause. The dispensary was established in July of 1891 and during this short period, has prospered greatly. During the year they treated ten thousand cases; the number of cures is very great. The Raja bears all the expenses which amount to about (150) one hundred and fifty rupees a month; Dr. Majumdar is an honorary superintendent. Here some of our students get their opportunity to learn clinical medicine.

The 15th of June, 1892, is especially memorable to us Homœopaths in India, as on that day we established our Calcutta Homœopathic Hospital. This is altogether a new feature in our country. It is entirely a charitable institution; all the patients are treated gratis. There are available spaces for (40) forty patients in the house where it is located now, besides a ward is set apart for receiving cholera patients. It is under the charge of Dr. B. V. Chatterji. There is a managing committee consisting of all the teachers of our

Homœopathic school and many Homœopathic physicians of the city; the secretary is Dr. P. C. Majumdar. On this hospital, though in its infancy, depends to a great measure the public recognition of Homœopathy in our country. It is, up to date, supported by subscriptions among the Homœopathic physicians of Calcutta. Our students get their clinical lectures here by the teachers.

There are about twenty Homœopathic pharmacies in Calcutta for preparing and selling medicines and I am happy to say they are in a prosperous condition.

There are very few books published in India in English, but many in our own language. I give below the names of the authors and their books.

Dr. Sircar.—Treatment of Cholera; Materia Medica.

Dr. Salzer.—Lectures on Cholera; Periodicity of Drugs, Cirrhosis of Liver.

Dr. Bhaduri.—Translation of Baehr's Science of Therapeutics, 2 vols. (Bengali); Treatment of Cholera (Bengali); Materia Medica (Bengali).

Dr. Majumdar.—Practice of Medicine, 2 vols. (Bengali); Materia Medica (Bengali); Translation of Bell's Therapeutics of Diarrhœa, Dysentery, etc. (Bengali); Treatment of Cholera (Bengali); Hering's Typhoid Fever (English); Epitome of Practice of Medicine (Bengali).

Dr. Banerji.—Theory of Homœopathy (Bengali).

Dr. Maitra.—Diseases of Children (Bengali); Treatment of Diarrhœa, etc. (Bengali).

The *Homœopathic Record* is a journal published and edited by Dr. J. C. Lahiri regularly every month.

The Indian *Homœopathic Review* now edited by P. C. Majumdar is an irregular visitor.

We have a Hahnemann Society in Calcutta. It meets every year to celebrate the anniversary of Hahnemann's birthday on the 10th of April. Special meetings may be called when required.

Two or three days before my departure from Calcutta, there was a meeting of Homœopathic physicians and students of our school to accord to me a farewell address. In that meeting one of our colleagues remarked that though our country was poor and dependent and we had nothing brilliant to offer to the members of the World's Homœopathic Congress and to our American colleagues, yet we

possess warm hearts and I believe Dr. Majumdar will be able to convey to them our warm and sincere greetings. Now, ladies and gentlemen, allow me to perform that pleasant duty of greeting you for myself and on behalf of my colleagues in India.

THE CHAIRMAN: Dr. Talbot, in this connection has a word to say from Dr. D. N. Banerjee, of Calcutta, India. He has received some communications, in the way of journals and otherwise for distribution, which can be obtained at the close of the session this morning. He is not here, so I will next call upon Dr. Fischer, of New South Wales.

DR. FISCHER, of Sidney: It is very little I have to say about our southern hemisphere of Australia, but I have prepared a few words which I will read to you.

ADDRESS.

HOMŒOPATHY IN AUSTRALIA.

By Charles F. Fischer, Sydney, N. S. W.

In presenting you with a report of the present state and progress of Homœopathy in Australasia, I must refer to its past history. It was forty years ago, in 1853, when I went to New Zealand, and had the fortune and honor of being the first practitioner who introduced Homœopathy in the Southern Hemisphere, which, thanks to the usual and bitter opposition our doctrine received from the Old School, gave me pluck and energy to work hard, and soon I succeeded in establishing a hospital of twenty beds, and published a periodical called the *Homœopathic Echo* in 1854, which formed a useful domestic guide to the settler in the remote bush where no doctor was obtainable, and the success of Homœopathy gained the affections of the people.

A few successful surgical operations created respect, and several practitioners of the Old School became converts to our ranks, and have been and are still enthusiasts in promoting the progress of our law of *similia similibus curantur*, and every city in New Zealand was and is supplied with practitioners of our school, who are flourishing and doing good work in those islands.

Australia, in 1854, followed with Dr. Shervin and Dr. Bellamy, and, in Melbourne, Dr. Barigni, as the pioneers. This latter city can boast of a splendid hospital of one hundred and twenty beds, which has gained the admission of the Allopathic School that typhoid fever, which is endemic in Melbourne, is more successfully treated in that hospital than in any hospital of the Old School.

Adelaide has a Children's Homœopathic Hospital, established by Dr. Chambers, and several graduates of our school enjoy the confidence of the people.

In Queensland, our school is well represented, and in Sydney,

where I practiced during the last twenty years, Homœopathy has gained great success, and is held in some esteem by the Old School, Though not possessing a hospital, soon we will have wards in a splendid building now in course of erection for incurables.

Tasmania, in all its cities, has Homœopathic practitioners, who are doing good work. All the Australasian colonies want is the enthusiasm, the energy, the talent and genius which is fostered here in America, and which has filled my heart with admiration, and which I have nowhere else found in the world where I have travelled.

THE CHAIRMAN: I have now the pleasure of presenting Dr. E. Vernon, President of the Canadian Institute of Homœopathy.

Dr. Vernon addressed the Congress as follows:

ADDRESS.

PROGRESS OF HOMŒOPATHY IN ONTARIO.

By E. Vernon, M.D., of Toronto, Canada.

In presenting a report of the progress of Homœopathy in Ontario for the last few years to this world-wide assembly of Homœopathic physicians, I am confronted at the very outset with a humiliating confession which I am compelled to make, and that is, that our numbers have not increased as fast as our popularity with the general public, or our legal and professional standing in the country would lead us to expect. And still our numbers have increased. I am unable to give you the exact number, but so far as I can learn we are between 60 and 70. Of these, 16 are in Toronto, where our largest representation in Ontario is. Many of the most wealthy and influential people of that city are firm adherents to our principles, and have assisted liberally with their means and influence towards securing a large and magnificent hospital, which has been moved into within the last few months. It is capable of accommodating about 200 patients, and has at present about 100. They have performed many of the principal surgical operations successfully, and are gaining not only a city but a provincial reputation for skill and success.

Our secretary of the Canadian Institute, Dr. Robinson, as well as Dr. Emory, the gynæcologist of the hospital, are placing their names in deserving prominence as surgeons, and, before leaving this imperfect notice of our Canadian hospital, I would like to call attention to the brilliant example of toleration and unbiassed fairness they have given the Old-School hospitals of our country. All the Allopathic hospitals of Canada compel the patient to submit to the treatment of the doctor who may be in attendance that month, and it has happened that a pay patient has been under the care of three different doctors in the same illness. But in the Homœopathic hos-

pital the patient takes his doctor from whatever school he chooses, and can keep him as long as he wishes, and that one act of fair dealing with the sick has done very much to make our system popular with most right-thinking people.

But the one thing that has placed Homœopathy in a better light in Canada than any other is the fact that all our medical matters are governed by a Medical Council, composed of 26 members, 5 of which are Homœopaths, 12 Allopaths, and 9 college men. This council is presided over by a president, and at three different times this president has been a Homœopathist. On the Medical Board of Examiners, which grants the privilege to practice medicine in our province, there is one Homœopathic examiner on general subjects, so that every practitioner of our country has to have his diploma ornamented with the name of a Homœopathic doctor.

We have, besides, an examiner on our special branches, so you will see that we stand so high that the most bigoted crank cannot point at us as being inferior in any medical attainment, and most of the general public think we know the Allopathic branches of study with Homœopathy added.

The great cause of our lack of numerical success is the fact of having to educate our students on this side of the border; and you people are so seductive that by the time they get to be a credit to us you have enticed them to stay, or they have enticed you to permit them to remain, I don't know which, but they stay. Now what we hope to do shortly is, to have a college of our own in connection with the hospital in Toronto; and although it has not been opened yet, and may not properly be considered as a fixed fact in the progress of Homœopathy, still its incubation has so far progressed that we can almost hear the chick peep, and when that event matures we hope to educate and keep our boys at home, and at the next Columbian Exhibition make a better showing than we are doing now.

ADDRESS.

HOMŒOPATHY IN LONDON, ENGLAND.

By J. Cavendish Molson, M.D., London, Eng.

The Chairman: Dr. J. Cavendish Molson, of the London Hospital, will now be presented.

Dr. Molson, of London, Eng. *Ladies and Gentlemen:* I think I have imbibed a little of the spirit of the Queen of Sheba this morning. The question before my mind is: "What shall the man do who cometh after the king?" in view of the splendid addresses to which we have listened this morning, for there is very little to add. I am here without my brief. I can give you as my reason for not giving you exact particulars as to the state of Homœopathy in London as a mayor of one of our western towns is said to have given to Queen Elizabeth for not ringing the bells. This mayor had eight reasons why the city bells were not rung in honor of her majesty's coming to town. Said he: "May it please your majesty, the first reason is that we have no bells," and Queen Elizabeth was so satisfied with the first reason that she dispensed with the other seven. Now, perhaps you will be satisfied with my reason for not reading a paper this morning, which is because our president faithfully promised to mail these necessary and precise particulars to me, and day after day I have gone full of hope to the letter-box, and this morning last of all, and have found no paper. But the paper shall be forthcoming. It would be a sin that London should not furnish you with those particulars which you desire.

There are just a few remarks which I would like to make bearing on the progress of Homœopathy in England and America. And, by the way, I believe if Columbus were here he would be occupying the presidential chair. It would be impossible for that man who had that veni, vidi, vici spirit not to be the pioneer of Homœopathy in this land. But we have great men in our time, and among them I desire to mention the name of our late lamented Major Vaughan

Morgan. This gentleman made an offer of a £1000 per annum for five consecutive years to St. George's Hospital in London, the offer being made on these lines, that the endowed ward should be opened for the reception of patients who should be treated on Homœopathic principles. The offer was not accepted. I desire to draw attention to two points in connection with this mistake on the part of our Allopathic friends. First of all, the Allopathic loss. We are told that Homœopathy and humbug are synonymous or equivalent terms. What a splendid opportunity was here presented to the dominant school to demonstrate the absurdity and humbuggery of our method. But it may be said, in the language of our illustrious bard:

> "There is a tide in the affairs of men
> Which, taken at the flood, leads on to fortune:
> Omitted, all the voyage of their life is bound
> In shallows and in miseries."

We have considered the Allopathic loss; now for the Homœopathic gain. The conduct of the hospital authorities was such that the public indignation which it aroused can be viewed in no other light than a Homœopathic gain.

I would like to call your particular attention to the following words, for they embody in the most logical manner the reasons for the non-acceptance of Major Morgan's magnanimous offer. Now listen with both ears, if you please:

> "I do not love you, Dr. Fell,
> The reason why I cannot tell;
> But this, indeed, I know full well,
> I do not love you, Dr. Fell."

I have the fact noted in my note-book here, that of 755 cases treated in our hospital in the past year, including 220 operations of all degrees of severity, we had only 11 deaths. Mr. Nugshore recognizes the value of the principle that "In union there is strength," and has been going through our provinces and endeavoring to conciliate the British Homœopathic Society on the one hand and to merge within its fostering care branch societies on the other hand. I believe I am correct in saying that Dr. Hawkes belonged to one of these branch societies which is now merged under the sheltering wing of the fostering parent sister, the British Homœopathic Society. I believe that the future Homœopath will depend

in a large degree upon its representatives. I have written my notes in shorthand, and I cannot read them. That is one of the peculiarities of shorthand writing. There are men of this stamp abroad who, when they see a diseased man or woman, regard that individual as a diseased machine. That is not the man who is going to set the Thames on fire, as we say in our country.

Then there is another class of practitioners who regard the diseased individuals not only as disorganized machines, but they recognize him as a human animal. And these men are a step in advance of the others, but I think perhaps very often they partake of the spirit of the Chinese who, when the floods were abroad, bent all their energies on rescuing a pig from the waters while scores of their fellow-creatures were drowned. What is the highest type of physician? It is said in the book of books: "I wish above all things that thou mayest prosper and be in health." I would like to inquire who is meant by "thou?" "Thy whole spirit and soul and body." Now, the man who has before him spirit, soul and body in a diseased organism will be the successful man and the highest type of physician.

Sometime ago I was in a place called Bromley, in Kent, and there had been a very able exponent of our school of medicine, the lamented Dr. Phillips, to whose memory there is a hospital erected in that town. It was said of him when he went to Bromley, by the Old-School men, "What is this young shaver going to do?" Now, he was a man that had a kind word for every person with whom he came in contact; he was a gentlemen, and he was so successful in that district that when I was there there were seven horses in the stable which had to carry him hither and thither. He died I believe at the early age of 35, but such was his devotion to duty, such his moral rectitude, such his affection for his patients that in a dying state he was literally carried into their houses to prescribe for them. These are the men who are the ornaments of our profession, and our literature teems with the names of such.

Without trespassing on your time any further, let me draw your attention to these words in honor of the illustrious founder of Homœopathy:

There lived a man, a man of men,
A king on fancy's throne;
We ne'er shall see his alike again.
The globe is all his own.

And if we claim him of our clan
He half belongs to you,
For Hahnemann, Friend Jonathan, is yours
And also Europe's, too.

THE CHAIRMAN: *Ladies and Gentlemen:* I am sure that I voice the sentiment of every member of the Congress when I extend to our distinguished foreign confreres our most cordial greetings. And also our thanks for their interest in Homœopathy and the success of the Congress shown by their presence with us. Our distinguished friend, Dr. Bojanus, of Russia, tells me that it has been the dream of his life to see his American confreres. Those of us who can remember how few in number in some countries are Homœopaths can realize the pleasure afforded this gentleman by seeing so large a delegation of believers in their faith collected together. Those who are here simply indicate to us the intense interest in Homœopathy throughout the world.

I wish there was time to read to you all the telegrams and letters that have been received from our illustrious associates in all other lands. Time, however, is wanting for that, but to all of them, in every clime, we extend our most sincere and cordial greeting and our thanks.

The hour for adjournment has now arrived. We shall be obliged to make the paper of Dr. D. A. Strickler, of St. Paul, Minnesota, the first order of business to-morrow morning. The meeting is now adjourned.

(The Sections in Materia Medica and in Obstetrics, held sessions at 3 o'clock P.M., at each of which several important papers were presented and discussed (see "Sectional Meetings" in each of those subjects).

FOURTH DAY'S SESSION.

JUNE 2, 1893.

The Congress was called to order at 11.30 o'clock by the President, Dr. J. S. Mitchell, who announced that the first address would be by Dr. D. A. Strickler, of St Paul, Minnesota, which was made the special order for this session.

Dr. Strickler's address is as follows:

ADDRESS.

COMPARATIVE VITAL STATISTICS—HOMŒOPATHY vs. ALLOPATHY.

By David A. Strickler, M.D., St. Paul, Minnesota.

Ladies and Gentlemen: The young man or the young woman who intends to read medicine, if not too greatly prejudiced in favor of one or the other school, naturally asks of each "in what particulars does it excel?" The answer to this question, however, interests not only the young man or the young woman intending to read medicine, but all mankind.

We believe that the Homœopathic system excels in many features, but it is my purpose to speak of but one—the one which should interest all—namely, the cure of the sick. This belief is founded partly on our own individual experiences and successes in the treatment of the sick. But a similar belief, similarly based, exists in the minds of practitioners of all schools, hence counts for naught with unprejudiced investigators.

Next comes our faith based on recorded results, *i.e.*, comparative vital statistics. On these the Homœopath places his reliance, and well may he do so.

It is not my province at this time to give statistics of earlier days, but I trust you will pardon me for briefly calling your attention to the comparative results in a few diseases which have had much to do with creating and sustaining the faith that is in us.

Of these take (1) Cockburne's cholera statistics, of dates prior to 1850. (See page 168.)

Again—the total (1) cholera statistics by Dr. Jal, St. Petersburg, Russia, 1840, were—Allopaths reported 901,413 cases, with 462,581 deaths, mortality per cent., 51.3; Homœopaths reported 16,436 cases with 1418 deaths, mortality per cent., 8.8.

In (2) yellow fever in 1878 the Allopaths reported a total of 96,187 cases with 22,296 deaths, mortality per cent., 23.6; the Homœopaths reported 3914 cases with 261 deaths, mortality per cent., 6.6.

	Allopathic.			Homœopathic.		
	Cases.	Deaths.	Death Rate; pr. c.	Cases.	Deaths.	Death Rate; pr.ct.
Bavaria	12,703	6,163	48.5	1,269	85	6.7
Paris	6,543	3,374	51.5	175	45	24.7
Dundee	157	87	55.5	173	48	27.7
Stockholm	4,143	2,447	59.7	76	6	8.0
Christiana	2,318	1,506	65.0	380	49	12.5
Helsingfors	3,328	1,607	48.2	1,093	95	8.7
Copenhagen	7,515	4,047	55.2	3,016	264	8.7
Paris Hospitals	4,203	3,144	74.7	1,270	108	8.5
Sweden	1,165	735	63.0	1,116	35	3.0
Totals	42,125	23,110	54.8	8,568	735	8.5

And so I might add the statistics in pneumonia, in typhoid fever and dysentery. If time permitted it could also be shown that private and public records, and records of (3) insane hospitals all tell one and the same story. Some of these statistics have been assailed with all the force and bitterness that the ablest writers of the opposing school could command, but they stand to-day, and will ever stand, as proud monuments of what Homœopathy did in its earlier days.

Dr. Horatio C. Wood (4) admits our early comparative success but accounts for it by charging his predecessors with doing "much more harm than good"—a charge which no longer holds good, according to the same authority. Our young friend may here interpose "granting that this was true in an earlier day, the Allopaths claim to have made wonderful advances since then; what have you to show that you are still ahead of them?"

In answer to this query we would say that in the (5) cholera epidemic of 1873, statistics from eighteen states gave 7356 cases with 3800 deaths, mortality per cent., 52; while the recent European epidemic of cholera served to show that in the treatment of this disease the Allopaths are no more successful than they were fifty years ago —the mortality per cent. being between 50 and 60; that the records in public institutions, such as city hospitals, (3) insane hospitals, penitentiaries, etc., where we have been given an opportunity show decidedly in our favor. Unfortunately we have too few public in-

stitutions under our control, and recent statistics are, consequently, somewhat fragmentary and limited.

It is a fact worthy of note that our friends of the Old School are not given to gathering statistics showing comparative results of treatment under the two dominant schools of medicine. I have been a pretty general reader of medical literature for the past twelve years or more, and have aimed to read all that I could find said against us, but I do not recall a single instance in which the writer gave statistics claiming superior results in treatment over us. The apparent need of recent full and reliable comparative vital statistics led me to commence an investigation of the health offices in the three largest cities in the State of my adoption, Minnesota, in June of 1891. The results of this investigation were given in an address (6) before the Minnesota State Institute of Homœopathy in May, 1892, and the State Institute was urged to instruct its delegates to the American Institute of Homœopathy to bring the matter before that body, and see whether it would not take up the work of collecting comparative results from the Boards of Health in all of the more important cities throughout the United States. Suffice it to say that the American Institute of Homœopathy assumed charge of the work, and by the Chairman of the Bureau of Organization, Registration and Statistics, the collection of these statistics was placed in my hands.

It was decided to have blank forms printed and sent to the different cities where statistics were to be collected, so that the work in all cities should be made in accordance with one general plan. After consultation with different persons interested in and familiar with the character of the work, it was thought best to have five forms printed for distribution. Form No. 1 calling for the number of cases of and deaths from small-pox, typhoid fever, scarlet fever, measles, diphtheria and mumps, reported by physicians of the Allopathic and Homœopathic schools respectively.

Form No. 2 calling for the number of births reported by members of each of the two schools, together with the number of deaths reported from puerperal causes under the various headings of puerperal septicæmia, puerperal fever, puerperal eclampsia, affections of pregnancy, uterine hæmorrhage, and dystocia, reported by each school. This form further calling for the premature and still births reported by each school.

Form No. 3 calling for the deaths from acute stomach and bowel

diseases, from acute respiratory diseases, from violence, and from all causes, reported by members of each of the two schools.

Form No. 4 calling for a tabulated list of the deaths reported by the Coroner, and the number of cases and deaths reported by the physicians having charge of the city poor—city physicians' cases and deaths.

Form No. 5 calling for cases of and deaths from typhus fever, cerebro-spinal meningitis, varicelli, pertussis, erysipelas and leprosy, reported by members of each school.

Form No. 5 is readily seen to be of limited application. The forms are based on the requirements of the Board of Health in New York City, which requires the maximum number of diseases reported, and as the greater includes the less, it is believed that the forms include all that is reported in any city.

The next thing in order was to find some suitable person or persons in each city to fill these blanks. That we were successful in this I think the following names of well-known physicians and surgeons will attest.

Philadelphia reported by Dr. H. L. Northrop under auspices of the Homœopathic Medical Society of Philadelphia County; St. Louis, by Dr. C. M. Ustick; Baltimore, by Dr. W. Dulaney Thomas (7); San Francisco, by Dr. Hayes C. French under auspices of Homœopathic Medical Society of San Francisco; Cincinnati, by Dr. A. E. Goldsmith, of Home City, O.; Detroit, by Dr. Rollin H. Stevens; Minneapolis, by Dr. William E. Leonard under auspices of the Minneapolis Homœopathic Medical Society; Rochester, by Dr. H. M. Hoyt; St. Paul, by myself; Kansas City, by Dr. S. C. Delap, in behalf of faculty of Kansas City Homœopathic Medical College; Providence, by Dr. George B. Peck; Denver, by Dr. J. M. Walker; Indianapolis, by Dr. O. S. and Solis Runnels; Allegheny, by Dr. J. Ritchey Horner; Syracuse, by Dr. E. E. Keeler; Nashville, by Dr. B. H. Enloe; Dayton, by Dr. Frank D. Bittinger; Duluth, by Dr. F. C. Bowman; Seattle, by Dr. E. Weldon Young; and Lincoln, by Dr. Benjamin F. Bailey (work done by health officers) (8).

The work of nearly all of these shows evidence of much painstaking care, and if the reports are not full, it is because the cases are poorly reported in a large number of cities and in many instances the records are very indifferently kept. It is a source of great disappointment to me, and I know it will be to all of you, to

know that so little attention and care are given to the reporting of contagious diseases by physicians all over the country—and I seriously question whether we are not the greater sinners in this direction—that, with a few exceptions, the records of cases of contagious diseases are of little value. I shall not, however, deviate from my original plan, but shall present to you all the facts learned by this investigation so that you may see for yourselves not only that there is no effort to hide anything, but also that there is a crying need of reform in the matter of reporting cases of contagious diseases and births in nearly every city in the United States.

The results obtained are given in a series of tables which I now submit (9).

TABLE NO. 1.—*Measles.*

Cities.	Year.	ALLOPATHIC.			HOMŒOPATHIC.		
		Cases.	Deaths.	Mortality per ct.	Cases.	Deaths.	Mortality per ct.
Philadelphia	1892	.....	70	.....	.....	5	.....
St. Louis	1891	742	49	6.6	162	0	0
Baltimore	1891	227	16	7.05	8	0	0
Baltimore	1892	3451	119	3.45	291	1	0.34
San Francisco	1892	.....	26	.....	.....	0	0
Cincinnati	1892	664	17	2.55	57	0	0
Detroit	1892	.....	21	.....	.....	1	.....
Minneapolis	1891	845	14	1.66	186	3	1.61
Minneapolis	1892	926	31	3.35	254	1	0.39
Kansas City	1891	14	2	14.3	.....	0	0
Kansas City	1892	80	0	0	17	0	0
Providence	1891	.....	2	.....	.....	1	.....
Providence	1892	.....	9	.....	.....	0	.....
Denver	1891	29	11	37.93	6	1	16.66
Denver	1892	61	2	3.28	6	0	0
Indianapolis	1891	1064	9	0.85	51	0	0
Indianapolis	1892	396	4	1	0	0	0
Allegheny	1892	.....	21	.....	.....	0	.....
Syracuse	1892	.....	9	.....	.....	0	.....
Nashville	1890	.....	3	.....	.....	.....	.....
Nashville	1891	95	23	34.21	60	1	1.66
Nashville	1892	.....	2	.....	.....	.....	.....
Duluth	1891	.....	3	.....	.....	0	.....
Lincoln	1892	.....	5	.....	.....	0	.....

The blanks (.....) indicate cases not reported.

TABLE No. 2.—*Typhoid Fever.*

Cities.	Year.	Allopathic.			Homœopathic.			Death Ratio.		Physicians' Ratio.	
		Cases.	Deaths.	Mortality pr. ct.	Cases.	Deaths.	Mortality per ct.	A.	H.	A.	H.
Philadelphia.....	1892	2022	365	18.05	333	60	18.01	6.08	1	.....	1
St. Louis.....	1892	2928	339	11.58	407	40	9.83	8.47	1	6.5	1
St. Louis.....	1891	236	168	71.18	42	14	33.33	12.	1	6.5	1
Baltimore	1891	224	189	84.37	5	8	?	24.87	1	15.12	1
Baltimore.....	1892	262	217	82.82	.....	7	?	31.	1	15.12	1
San Francisco...	1892	.....	99	.....	.....	4	.....	24.75	1	7.45	1
Cincinnati.....	1892	222	130	58.55	3	8	?	16.25	1	7.5	1
Detroit.....	.....	.....	19	.....	.....	5	.....	3.8	1	7.12	1
Minneapolis.....	1891	522	76	14.65	60	17	28.33	4.47	1	5.23	1
Minneapolis.....	1892	436	60	16.	25	5	20.	12.	1	5.23	1
Rochester	.....	257	57	22.19	51	22	43.13	2.59	1	4.25	1
St. Paul.....	1890	.....	58	.....	....	7	.....	8.29	1	6.36	1
St. Paul.....	1891	.....	54	.....	.....	4	.....	13.5	1	6.36	1
St. Paul.....	1892	.....	58	.....	....	4	.....	14.5	1	6.36	1
Kansas City	1891	.....	51	.....	.....	5	.....	10.2	1	7.22	1
Kansas City	1892	.....	41	.....	.....	4	.....	10.25	1	7.22	1
Providence.....	1891	154	41	26.62	22	11	50.	3.73	1	3.57	1
Providence.....	1892	104	28	26.92	21	6	28.57	4.66	1	3.57	1
Denver.....	1891	54	94	?	18	5	27.77	18.8	1	5.66	1
Denver.....	1892	64	58	90.63	13	6	46.15	9.66	1	5.66	1
Indianapolis.....	1891	.....	32	.....	.....	2	.....	16.	1	2.8	1
Indianapolis.....	1892	.....	61	.....	.....	3	.....	20.	1	21.8	1
Allegheny.....	1892	.....	119	.....	.....	7	.....	17.	1	7.61	1
Syracuse.....	1892	.....	33	.....	.....	1	.....	33.	1	8.47	1
Nashville.....	1390	.....	74	.....	.....	2	.....	37.	1	18.91	1
Nashville.....	1891	21	79	?	.....	2	.....	39.5	1	18.91	1
Nashville.....	1892	.....	69	.....	... .	0	.....	69.	0	18.91	1
Dayton	1892	58	33	56.89	52	2	3.85	16.5	1	8.58	1

Blanks (.....) indicate cases not reported.

TABLE No. 3.—*Diphtheria.*

Cities.	Year.	Allopathic.			Homœopathic.			Death Ratio.		Physician's Ratio.	
		Cases.	Deaths.	Mortality per ct.	Cases.	Deaths.	Mortality per ct.	A.	H.	A.	H.
St, Louis	1892	636	265	41.67	101	28	27.72	9.15	1	6.5	1
Baltimore	1891	779	350	44.91	38	17	43.65	20.6	1	15.12	1
Baltimore	1892	753	358	47.54	41	30	73.17	11.93	1	15.12	1
San Francisco	1892	.....	248	.....	.....	11	.....	22.55	1	7.45	1
Cincinnati	1892	1063	290	27.28	71	31	43.22	9.36	1	7.50	1
Detroit	1892	980	212	21.63	171	42	24.56	5.	1	7.12	1
Minneapolis	1891	285	91	31.93	62	13	20.97	7.	1	5.23	1
Minneapolis	1892	246	57	23.17	53	12	22.65	4.75	1	5.23	1
Rochester	.....	420	198	47.14	150	56	36.	5.5	1	4.25	1
St. Paul	1890	332	111	33.33	25	9	36.	12.33	1	6.37	1
St. Paul	1891	289	99	30.8	11	2	18.18	49.5	1	6.37	1
St. Paul	1892	346	148	42.77	25	4	16.	37.	1	6.37	1
Kansas City	1891	80	43	53.75	26	2	7.69	21.5	1	7.22	1
Kansas City	1892	74	13	17.57	13	4	30.76	3.25	1	7.22	1
Providence	1891	116	30	25.86	19	4	21.05	7.5	1	3.57	1
Providence	1892	89	19	21.35	14	3	21.43	6.33	1	3.57	1
Denver	1891	339	123	36.58	73	21	28.77	5.86	1	5.66	1
Denver	1892	241	75	31.12	46	10	21.74	7.5	1	5.66	1
Indianapolis	1891	612	164	26.8	46	9	19.57	18.22	1	21.8	1
Indianapolis	1892	500	155	31.	25	11	44.	14.1	1	21.8	1
Allegheny	1892	.....	86	.....	.....	7	.....	12.29	1	7.61	1
Syracuse	1892	100	52	52.	5	2	40.	26.	1	8.47	1
Nashville	1890	22	4	18.18	7	1	14.3	4.	1	18.91	1
Nashville	1891	5	10	20. ?	0	0	0.	10.	0	18.91	1
Nashville	1892	18	7	39.	2	2	100.	3.5	1	18.91	1
Dayton	1892	70	33	47.14	56	5	8.91	6.6	1	8.58	1
Duluth	1891	158	26	16.46	22	7	31.82	3.7	1	7.93	1
Duluth	1892	96	32	33.33	14	6	42.83	5.33	1	7.93	1
Lincoln	1892	116	31	26.72	35	9	25.71	3.44	1	4.13	1

TABLE NO. 4.—*Scarlet Fever.*

Cities.	Year.	Allopathic.			Homœopathic.		
		Cases.	Deaths.	Mortality per ct.	Cases.	Deaths.	Mortality per ct.
Philadelphia	1892	5213	395	7.58	1053	71	6.74
St. Louis	1891	813	95	10.46	138	5	3.62
Baltimore	1891	1311	128	9.76	71	8	11.26
Baltimore	1892	2495	250	10.	168	9	5.36
San Francisco	1892	.....	96	.....	.....	1	.....
Cincinnati	1892	688	43	6.25	66	1	1.61
Detroit	1892	705	106	15.03	149	12	8.05
Detroit	1891	706	56	7.93	130	2	1.54
Minneapolis	1891	531	34	6.4	191	5	2.63
Minneapolis	1892	636	52	8.18	193	5	2.59
Rochester	1892	679	57	8.54	209	16	7.65
St. Paul	1890	334	26	7.78	56	1	1.79
St. Paul	1891	359	22	6.13	93	2	2.15
St. Paul	1892	307	20	6.51	71	0	0
Kansas City	1891	185	6	3.24	26	0	0
Kansas City	1892	168	7	4.17	44	2	4.54
Providence	1891	190	14	7.37	45	0	0
Providence	1892	199	23	11.56	48	4	8.33
Denver	1891	189	13	6.87	56	4	7.14
Denver	1892	689	52	7.55	114	5	4.39
Indianapolis	1891	355	12	3.38	51	1	1.96
Indianapolis	1892	258	7	2.7	12	0	0
Allegheny	1892	.....	38	.....	.....	0	.....
Syracuse	1892	61	1	1.64	13	0	0
Nashville	1890	13	2	15.4	4	0	0
Nashville	1891	43	3	7.	3	0	0
Nashville	1892	32	0	0.	8	0	0
Dayton	1892	6	3	5.0	7	0	0

TABLE NO. 5.—*Obstetrical, No. 1.*

Cities.	Year.	Allopathic.			Homœopathic.		
		Cases.	Deaths.	Mortality per ct.	Cases.	Deaths.	Mortality per ct.
St. Louis	1892	3101	99	3.13	740	15	2.03
Baltimore	1891	2935	97	3.30	229	2	0.87
Baltimore	1892	3124	107	3.42	172	0	0
San Francisco	1892	.....	168	.....	.....	5	.....
Cincinnati	1892	2619	131	5.	280	6	2.14
Detroit	1892	.....	26	.....	.....	2	.....
Minneapolis	1891	1304	30	2.3	386	1	0.26
Minneapolis	1892	1557	30	1.93	460	4	0.87
Rochester	1892	1076	20	1.36	420	6	1.43
St. Paul	1890	1068	25	2.34	166	5	3.
St. Paul	1891	1559	19	1.22	185	1	0.54
St. Paul	1892	2068	23	1.11	227	0	0
Kansas City	1891	1971	42†	2.13	152	1	0.66
Kansas City	1892	2102	25†	1.19	145	0	0
Providence	1891	.....	13	.....	.....	1	.....
Providence	1892	.....	15	.....	.....	7	.....
Denver	1891	.....	20	.....	.....	1	.....
Denver	1892	.....	.....	.....	.....	.....	.....
Indianapolis	1891	.....	19	.....	.....	0	.....
Indianapolis	1892	1888	8	0.42	56	0	0
Allegheny	1892	.....	28	.....	.....	1	.....
Syracuse	1892	1179	4	0.35	189	0	0
Nashville	1890	618	7	1.13	47	0	0
Nashville	1891	801	16	2.	66	0	0
Nashville	1892	848	7	0.82	71	0	0
Duluth	1891	726	4	0.55	71	1	1.41
Duluth	1892	540	3	0.56	62	0	0
Seattle	1892	404	5	1.21	96	0	0
Lincoln	1892	.....	26	.....	.....	6	.....

The blanks (.....) indicate cases not reported.

† Includes "Peritonitis," "Septicæmia" of females between 14 and 45 years of age.

TABLE NO. 6.—*Obstetrical No.* 2.

Cities.	Yr.	Puerperal Septicæmia		Puerperal Fever.		Puerperal Eclampsia.		Affect'ns of Pregnancy.		Uterine Hæmor'age		Dystocia.	
		Allo.	Hom.	Allo.	Hom.	Allo.	Hom.	Allo.	Hom.	Allo.	Hom.	Allo.	Hom.
St. Louis.....	1892	36	4	28	3	8	3	15	4	2	...	12	2
Baltimore	91	23	...	28	...	11	..	4	1	5	1	26	...
Baltimore	92	17	...	38	...	15	...	23	...	3	...	11	...
San Francisco	92	29	1	87	3	7	...	28	1	8	...	9	...
Cincinnati.....	92	...	...	84†	5†	16	...	26	...	5	1	...	...
Detroit.....	92	...	...	20	0	6	2	...	...	...	...	...	...
Minneapolis ...	91	13	...	13	...	1	1	2	...	...	...	1	...
Minneapolis ...	92	8	1	13	...	3	1	2	...	1	2	3	...
Rochester	92	3	1	7	2	5	1	...	...	4	2	1	...
St. Paul.....	90	8	1	11	1	0	2	...	...	3	...	3	1
St. Paul.....	91	8	...	7	...	3	1	...	...	1	...	...	...
St. Paul.....	92	5	...	10	...	...	...	1	...	1	...	6	...
Kansas City....	91	34‡	1	3	0	...	...	0	0	1	0	0	0
Kansas City....	92	19‡	0	3	0	...	...	1	0	0	0	2	0
Providence	91	5	...	2	...	2	...	2	1	...	...	2	...
Providence	92	1	...	5	3	2	1	1	2	2	...	2	1
Denver.....	91	10	1	17	...	3	...	...	...	...	...	...	...
Denver.....	92	...	...	...	...	...	...	...	...	...	...	...	...
Indianapolis...	91	4	...	7	...	2	...	4	...	2	...	...	...
Indianapolis...	92	3	...	1	...	5	...	...	...	...	...	...	...
Allegheny	92	6	0	12	0	2	...	3	...	5	1	...	...
Syracuse.....	92	...	...	2	...	...	...	1	...	...	...	1	...
Nashville	90	...	...	2	...	4	...	...	...	1	...	...	...
Nashville	91	4	...	3	...	4	...	4	...	...	...	1	...
Nashville	92	2	...	3	...	1	...	1	...	...	...	...	...
Duluth.....	91	3	...	1	1	...	...	...	...	...	...	...	...
Duluth.....	92	2	...	1	...	...	...	...	...	...	...	...	...
Seattle.....	92	2	...	...	...	3	...	...	...	...	...	...	...
Lincoln.....	92	...	...	1	1	4	..	18	3	4	2	...	...

Blanks (.....) indicate cases not reported.

† Includes Puerperal Septicæmia.

‡ Includes Peritonitis and Septicæmia of females between 14 and 45 years of age.

TABLE NO. 7.—*From Form No. 5.*

Cities.	Year.	Deaths from Cerebro-Spinal Meningitis.			Pertussis.						Ratio of Deaths.		Deaths from Erysipelas.		Ratio.	
					Allopathic.			Homœopathic.								
		Allop.	Hom.	Ratio. A. H.	Cases.	Deaths.	Per cent.	Cases.	Deaths.	Per cent.			Allop.	Hom.	All.	Ho.
St. Louis	1891	211	17	12.4 1	135	55	40.7	29	7	24.1	7.86	1	28	1	28.	1
Baltimore	1891	18	0	18. 0	224	103	46	1	3	?	34.3	1	15	0	15.	0
Baltimore	1892	37	0	37. 0	94	32	34	4	1	25.	32.	1	24	1	24.	1
Cincinnati	1892	234	24	9.75 1	222	40	18	15	3	20.	13.3	1	29	3	9.66	1
Detroit	1892	13	2	6.5 1	.....	8	.....	.....	1	.....	8.	1	11	2	5.5	1
Minneapolis	1892	15	5	3. 1	.....	23	.....	.....	6	.....	3.83	1	9	2	4.5	1
Providence	1891	4	1	4. 1	.....	34	.....	.....	3	.....	11.3	1	4	1	4.	1
Providence	1892	7	0	7. 0	.....	3	.....	.....	3	.....	1.	1	6	1	6.	1
Indianapolis	1892	56	2	28. 1	.....	9	.....	.....	1	.....	9.	1	10	1	10.	1
Allegheny	1892	201	9	22.3 1	.....	9	.....	.....	2	.....	4.5	1	12	0	12.	0
Syracuse	1892	70	4	17.5 1	.....	.....	.....	.....	.....	.....	.....	1	4	0	4.	0
Nashville	1890	59*	8	7.4 1	.....	10	.....	.....	0	.....	10.	0	2	0	2.	0
Nashville	1891	71*	4	17.8 1	2	16	?	8	2	25.	8.	1	7	0	7.	0
Nashville	1892	78*	5	15.6 1	.....	5	.....	.....	0	.....	5.	0	4	0	4.	0

* Under head of "Cerebro-Spinal Meningitis" are classed all acute non-tubercular diseases of Brain and Chord and Meninges.

TABLE NO. 8.—*Ratio of Work Reported, and of Physicians.*

Cases Reported.	Philadelphia. 1892.		St. Louis. 1891 and 1892.		Baltimore. 1891 and 1892.		San Francisco. 1892.	
	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.
Typhoid Fever	2022	333	236	42	484	5	.....	.....
Scarlet Fever	5213	1053	813	138	3,806	239	.....	.....
Measles	.....	.....	742	162	3,678	299	.....	.....
Diphtheria	.....	.....	636	101	1,531	79	.....	.....
Births	.....	.....	3101	740	6,059	407	.....	.....
Totals	7235	1386	3456	1590	15,559	1023	.....	.....
Ratio, cases reported.	5.22	1	5.31	1	15.21	1	.....	.....
Physicians reporting.	2036	(3) 394	(1) 637	98	(1) 771	51	(1) 700	94
Ratio physicians	5.17	1	6.5	1	15.12	1	7.45	1

Cases Reported.	Cincinnati. 1892.		Detroit. (First ½ of 1892.) 1891 and 1892.		Minneapolis. 1891 and 1892.		Rochester. 1892.	
	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.
Typhoid Fever	222	3	.....	.....	958	85	257	51
Scarlet Fever	688	66	1411	279	1167	384	679	209
Measles	664	57	.....	.....	1771	440	.....	.....
Diphtheria	1063	71	980	171	531	115	420	150
Births	2619	280	.....	.....	2861	846	1076	420
Totals	5256	477	2391	450	7288	1870	2432	830
Ratio, cases reported	11.02	1	5.31	1	3.89	1	2.93	1
Physicians reporting	450	60	(1) 349	49	(3) 277	53	(1) 234	55
Ratio, Physicians	7.5	1	712	1	5.23	1	4.25	1

Cases Reported.	St. Paul. 1890, '91 & '92.		Kansas City. 1891 and 1892.		Providence. 1891 and 1892.		Denver. 1891 and 1892.	
	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.
Typhoid Fever	.....	.....	.....	.....	258	43	118	31
Scarlet Fever	1000	220	353	70	389	93	878	170
Measles	.....	.....	.....	.....	.....	.....	90	12
Diphtheria	967	61	154	39	214	33	580	119
Births	4695	578	4073	299	.....	.....	.....	.....
Totals	6662	859	4580	408	861	169	1666	332
Ratio, cases reported	7.75	1	11.2	1	5.09	1	5	1
Physicians reporting	(1) 172	27	(1) 267	37	(2) 107	30	(1)340	60
Ratio, Physicians	6.37	1	7.22	1	3.57	1	5.66	1

TABLE 8.—(Concluded).

Cases Reported.	Indianapolis. 1891 and 1892.		Allegheny. 1892.		Nashville. 1890, '91 & '92.		Syracuse. 1892.	
	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.
Typhoid Fever	.....	.....	.....	.....	21	0	.....	.....
Scarlet Fever	613	63	.....	.....	88	17	61	13
Measles	1460	51	.....	.....	95	60	.....	.....
Diphtheria	1112	71	.....	.....	45	9	100	5
Births	.....	.....	.....	.....	2267	184	1179	189
Totals	3185	185	0	0	2516	270	1340	207
Ratio, cases reported	17.22	1	.....	.....	9.32	1	6.47	1
Physicians reporting	(3) 305	14	(1) 137	18	(3) 208	(3)11	166	19
Ratio, physicians	21.8	1	7.61	1	18.91	1	3.74	1

Cases reported.	Dayton. 1892.		Duluth. 1891 and 1892.		Seattle. 1892.		Lincoln. 1892.	
	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.	Allop.	Hom.
Typhoid Fever	58	52	701	59	.....	.....	.....	.....
Scarlet Fever	6	7	109	11	.....	.....	66	9
Measles	.....	.....	.....	.....	.....	.....	.....	.....
Diphtheria	70	56	254	36	.....	.....	116	35
Births	.....	.....	1206	133	404	96	.....	.....
Totals	134	115	2330	259	404	96	182	44
Ratio, cases reported	1.65	1	9	1	4.21	1	3.91	1
Physicians reporting	(3) 103	12	(3) 50	7	(3) 115	16	(1) 62	15
Ratio, Physicians	8.58	1	7.14	1	77.19	1	4.13	1

Blanks (.....) indicate cases not reported.

(1) Physician's report.

(2) Members of two State Societies.

(3) From 3d edition *Medical and Surgical Register* (Polk).

TABLE NO. 9.—*From Form No. 3, "Deaths."*

Cities.	Year.	Acute Stom'ch & Bowel Diseases.		Death Ratio.		Acute Respiratory Diseases.		Death Ratio.	
		Allop.	Hom.	A.	H.	Allop.	Hom.	A.	H.
St. Louis	1892	808	67	12.1	1	1415	83	17.1	1
Baltimore	1891	1083	42	25.8	1	1396	46	30.35	1
Baltimore	1892	1307	47	27.8	1	1107	42	26.35	1
San Francisco	1892	563	12	47.08	1	1966	49	40.12	1
Cincinnati	1892	464	44	10.54	1	902	61	14.78	1
Detroit	1891	314	33	9.52	1	328	41	8.	1
Minneapolis	1891	188	36	5.22	1	279	41	6.8	1
Minneapolis	1892	223	33	6.76	1	314	42	7.47	1
Rochester	1892	303	67	4.52	1	541	95	5.69	1
St. Paul	1890	230	15	15.33	1	197	32	6.13	1
St. Paul	1891	167	19	8.79	1	279	17	16.23	1
St. Paul	1892	205	12	17.1	1	256	32	8.	1
Kansas City	1891	133	7	19.	1	218	10	21.8	1
Kansas City	1892	154	7	22.	1	203	7	29.	1
Providence	1891	169	19	8.9	1	251	33	7.61	1
Providence	1892	219	26	8.42	1	280	47	5.96	1
Denver	1891	193	23	8.39	1	391	37	10.57	1
Denver	1892	179	9	19.9	1	175	19	9.21	1
Indianapolis	1891	178	4	44.5	1	285	1	285.	1
Indianapolis	1892	140	7	20.1	1	183	2	91.5	1
Allegheny	1892	349	15	25.27	1	387	24	16.12	1
Syracuse	1892	223	27	8.28	1	415	35	12.57	1
Nashville	1890	229	12	19.	1	125	6	20.8	1
Nashville	1891	193	9	21.44	1	229	9	23.1	1
Nashville	1892	183	7	26.14	1	175	13	13.5	1
Dayton	1892	124	5	24.8	1	116	13	9.	1
Duluth	1891	79	2	39.5	1	65	2	32.5	1
Duluth	1892	66	3	22.	1	35	4	8.75	1
Seattle	1892	39	3	13.	1	63	9	7.	1
Lincoln	1892	79	6	16.2	1	105	16	5.56	1
		From all causes.				Ratio of cases Reported.		Ratio of Physicians.	
St. Louis	1892	3197	237	13.47	1	5.32	1	6.5	1
Baltimore	1891	9501	356	26.69	1	15.21	1	15.12	1
Baltimore	1892	9513	481	19.78	1	15.21	1	15.12	1

TABLE 9.—(Concluded).

Cities.	Year.	From all Causes.		Death Ratio.		Ratio of Cases Reported.		Ratio of Physicians.	
		Allop.	Hom.	A.	H.	Allop.	Hom.	A.	H.
San Francisco	1892	6674	198	33.71	1	.....	1	7.45	1
Cincinnati	1892	5150	381	13.52	1	11.02	1	7.5	1
Detroit	1891	1057	137	7.79	1	5.31	1	7.12	1
Minneapolis	1891	1601	295	5.42	1	3.89	1	5.23	1
Minneapolis	1892	1690	305	5.54	1	3.89	1	4.25	1
Rochester	1892	2068	460	4.5	1	2.93	1	4.25	1
St. Paul	1890	1440	154	9.35	1	7.75	1	6.37	1
St. Paul	1891	1628	141	11.54	1	7.75	1	6.37	1
St. Paul	1892	1464	137	10.6	1	7.75	1	6.37	1
Kansas City	1891	1620	82	19.75	1	11.	1	7.22	1
Kansas City	1892	1526	90	16.96	1	11.	1	7.22	1
Providence	1891	1692	273	6.2	1	5.09	1	3.57	1
Providence	1892	1734	302	5.14	1	5.09	1	3.57	1
Denver	1891	.....	.....	.....	1	5.	1	5.66	1
Denver	1892	.....	.....	.....	1	5.	1	5.66	1
Indianapolis	1891	1874	1873	25.66	1	17.43	1	21.8	1
Indianapolis	1892	2116	53	39.92	1	17.43	1	21.8	1
Allegheny	1892	1921	137	14.08	1	0.	1	7.61	1
Syracuse	1892	1505	155	9.71	1	6.47	1	8.47	1
Nashville	1890	1152	78	14.77	1	9.32	1	18.91	1
Nashville	1891	1445	74	19.52	1	9.32	1	18.91	1
Nashville	1892	1263	85	14.86	1	9.32	1	18.91	1
Dayton	1892	687	52	13.21	1	9.	1	8.58	1
Duluth	1891	.....	.....	.....	1	9.	1	7.93	1
Duluth	1892	.....	.....	.....	1	9.	1	7.93	1
Seattle	1892	346	51	6.8	1	4.21	1	7.19	1
Lincoln	1892	428	67	6.39	1	4.14	1	4.13	1

These tables, showing as they do the results of a very large amount of labor in many different cities, cannot be studied with anything like the care they deserve in the few minutes now at our disposal. It is out of the question for me to go into details, or to consider the cities separately in the short time allotted me. I will, therefore, simply call your attention to some general features of the

different tables, leaving it for you to study them more in detail at your leisure. I invite you to make such study, as I believe you will find it both interesting and profitable.

Taking the tables up in the order given, we have first, *Measles.* The only cities in which there is any pretence of reporting cases, are St. Louis, Baltimore, Cincinnati, Minneapolis, Kansas City, Denver, Indianapolis, and Nashville in 1891. These cities report totals as follows: Allopaths, 8656 cases with 297 deaths, mortality per cent., 3.43; Homœopaths, 1098 cases with 7 deaths, mortality per cent., 0.64.

It is questionable whether in Baltimore in 1891, Kansas City, Denver, Indianapolis, in 1892, and Nashville with an Allopathic total of 568 cases reported and 54 deaths, mortality per cent., 9.5; and a Homœopathic total of 97 cases with 2 deaths, mortality per cent., 2.06; there is anything more than a pretence of reporting cases. In the rest of the cities named the reports may be approximately correct. They show that the Allopaths reported 8088 cases with 243 deaths, mortality per cent., 3.04; while the Homœopaths reported 1001 cases with 5 deaths, mortality per cent., 0.5.

Of the cities reporting deaths alone we have reports from Philadelphia, San Francisco, Detroit, Providence, Allegheny, Syracuse, Nashville, Duluth, and Lincoln giving total deaths, Allopaths 171 to the Homœopaths' 7. Ratio, 24.43 to 1. These cities report of other diseases and births—Allopaths 16,855 cases to the Homœopaths', 2785; ratio, 6 to 1 and have of physicians; Allopaths, 3815; Homœopaths, 637; ratio, 6 to 1.

In no city is the Homœopathic mortality as high as the Allopathic, and in only one of the cities named as perhaps approximately correct is our maximum mortality as high as their minimum.

Table No. 2 deals with *Typhoid Fever.* Here we find a larger number of cities pretending to report cases. That it is largely a matter of pretence with many, a glance at the table will readily convince any one familiar with the facts, and the results in typhoid, but following the order laid down we find that Philadelphia, St. Louis, Baltimore, Cincinnati, Minneapolis, Rochester, Providence, Denver, Nashville, in 1891, Dayton and Duluth report—Allopaths, 8265 cases with 2037 deaths, mortality per cent., 24.65; Homœopaths, 1131 cases with 224 deaths, mortality per cent., 19.71.

Of these cities, Philadelphia, St. Louis, in 1892, Minneapolis,

Dayton, and Duluth, in 1891, have apparently the fullest reports of cases attended. They report—Allopaths, 6502 cases with 940 deaths, mortality per cent., 14.46; Homœopaths, 941 cases with 131 deaths, mortality per cent., 13.92. The rest of the cities in the list report—Allopaths, 1763 cases, with 1097 deaths, mortality per cent., 62.22; Homœopaths, 190 cases with 93 deaths, mortality per cent., 48.95. The cities reporting deaths alone, are San Francisco, Detroit, St. Paul, Kansas City, Indianapolis, Allegheny, Syracuse, Nashville in 1890 and 1892, and Lincoln. They report—Allopaths, 801; Homœopaths, 55; ratio, 14.56 to 1. These cities report of other diseases and births, Allopaths, 20,756; Homœopaths, 2423; ratio, 8.15 to 1, and have of physicians, Allopaths, 2336; Homœopaths, 284; ratio, 8.33 to 1.

Table No. 3 deals with *Diphtheria.* The cities reporting cases of diphtheria are St. Louis, Baltimore, Cincinnati, Detroit, Minneapolis, Rochester, St. Paul, Kansas City, Providence, Denver, Indianapolis, Syracuse, Nashville, Dayton, Duluth and Lincoln. They report—Allopaths, 8765 cases, with 2996 deaths, mortality per cent., 34.07; Homœopaths, 1141 cases, with 347 deaths, mortality per cent., 30.41. Cities in which both schools report 40 per cent. or less are St. Louis, Detroit, Minneapolis, St. Paul, in 1890 and 1891, Kansas City, Providence, Denver, Nashville, in 1890, Duluth in 1891 and Lincoln. They report—Allopaths, 4615 cases with 1356 deaths, mortality per cent., 39.37; Homœopaths, 724 cases with 176 deaths, mortality per cent., 24.31. The rest of the cities reporting but, on account of high death-rates, not believed to be fully reported, give Allopaths, 4150 cases with 1630 deaths, mortality per cent., 39.3; Homœopaths, 417 cases with 171 deaths, mortality per cent., 41. Cities not reporting cases are San Francisco and Allegheny. They report deaths, Allopaths 334; Homœopaths 18; ratio, 18.55 to 1. There are of physicians, Allopaths, 837; Homœopaths, 112; ratio, 7.47 to 1.

Table No. 4 treats of *Scarlet Fever.* Scarlet fever is without doubt the best reported disease, in nearly, if not quite every city represented in this report. I am sorry to have to say that there is plenty of evidence that it is not well reported in a vast majority of cities. The cities reporting cases of scarlet fever are Philadelphia, St. Louis, Baltimore, Cincinnati, Detroit, Minneapolis, Rochester, St. Paul, Kansas City, Providence, Denver, Indianapolis, Syracuse,

Nashville, Dayton, Duluth and Lincoln. They report totals as follows—Allopaths, 17,340 cases with 1466 deaths, mortality per cent., 8.45; Homœopaths, 3039 cases, with 157 deaths, mortality per cent., 5.16. Cities with 12 per cent. or less mortality report—Allopaths, 16,463 cases with 1317 deaths, mortality of 8 per cent.; Homœopaths, 2862 cases with 141 deaths, mortality per cent., 4.93. Detroit in 1892, Nashville in 1890, Dayton, Duluth in 1892, and Lincoln all report more than 12 per cent. mortality, and are probably not worthy of credence. They report —Allopaths, 877 cases with 149 deaths, mortality per cent., 17; Homœopaths, 177 cases with 16 deaths, mortality per cent., 9. Cities reporting deaths alone are San Francisco and Allegheny. They report—Allopaths, 134 to the Homœopaths 1. Physicians reporting are Allopaths, 837; Homœopaths, 112; ratio, 7.47 to 1.

Table No. 5, *Obstetrical No.* 1, deals with the number of cases of labor attended by members of the two schools, and the number of deaths from puerperal causes.

In studying this table I would call your attention to the fact that it does not include the cases attended by midwives, and consequently if the number of cases here given seems small for the number of deaths given in Table 9, it is in part due to the large number of cases of labor attended by midwives in every city reported. There is, however, good evidence that labors are not fully reported in a large number of cities.

Of the cities reporting cases, we find that St. Louis, Baltimore, Cincinnati, Minneapolis, Rochester, St. Paul, Kansas City, Indianapolis in 1892, Syracuse, Nashville, Duluth and Seattle report—Allopaths, 31,488 cases with 702 deaths, mortality per cent., 2.23; Homœopaths, 4219 cases with 42 deaths, mortality per cent., 1.

Of cities not reporting cases we find San Francisco, Detroit, Providence, Denver, Indianapolis, in 1891, Allegheny and Lincoln reporting—Allopaths, 315 deaths to the Homœopaths, 23; ratio, 17 to 1, while the physicians are—Allopaths, 2000; Homœopaths, 280; ratio, 7.14 to 1.

Table No. 6, *Obstetrical No.* 2.—This table deals with the number of deaths from the different puerperal causes reported by physicians of the two schools and should be studied in connection with the preceding table, Table No. 5, to be properly comprehended.

Taking the cities mentioned as reporting cases of labor, we have

seen that they report—Allopaths, 31,488 cases to the Homœopaths' 4219, or 7.46 to our 1.

They report deaths as follows: from puerperal septicæmia, 190 to our 9; ratio, 21 to 1; from puerperal fever, 258 to our 11; ratio, 23.45 to 1; from puerperal eclampsia, 79 to our 9; ratio, 8.77 to 1; from affections of pregnancy, 97 to our 8; ratio, 12.12 to 1; from uterine hæmorrhage, 27 to our 6; ratio, 4.5 to 1; and from dystocia, 67 to our 3; ratio, 22.33 to 1.

Cities not reporting cases of labor are San Francisco, Detroit, Providence, Denver, Indianapolis, in 1891, Allegheny and Lincoln. They have of physicians: Allopaths, 2000; Homœopaths, 280; ratio, 7.14 to 1; and report deaths as follows: puerperal septicæmia, 55 to our 2; ratio, 27.5 to 1; puerperal fever, 151 to our 7; ratio, 21.6 to 1; puerperal eclampsia, 26 to our 3; ratio, 8.66 to 1; affections of pregnancy, 54 to our 6; ratio, 9 to 1; uterine hæmorrhage, 21 to our 3; ratio, 7 to 1; and from dystocia, 11 to our 1.

Table No. 7 (from Form No. 5).—This table gives the number of cases of pertussis reported, and deaths from the same. It gives also the number of deaths from cerebro-spinal meningitis and from erysipelas. Under the head of pertussis we find that St. Louis, Baltimore, and Cincinnati report—Allopaths, 675 cases with 230 deaths, mortality per cent., 34.1; Homœopaths, 49 cases with 14 deaths, mortality per cent., 28.6. It is scarcely necessary to say that the reports of cases of pertussis are utterly useless. The cities reporting deaths alone are Detroit, Minneapolis, 1892, Providence, Indianapolis, in 1892, Allegheny and Nashville. They report deaths, Allopaths, 117; Homœopaths, 18; ratio, 6.5 to 1. St. Louis, Baltimore, Cincinnati, Detroit, Minneapolis, in 1892, Providence, Allegheny, Syracuse and Nashville report deaths from cerebro-spinal meningitis: Allopaths, 1064; Homœopaths, 81; ratio, 13.13 to 1. The same cities report deaths from erysipelas: Allopaths, 165; Homœopaths, 12; ratio, 13.75 to 1; and have of physicians: Allopaths, 3407; Homœopaths, 403; ratio, 8.43 to 1.

Table No. 8, *Ratio of Work Reported and of Physicians.*—This table is designed to show the relation between the number of cases of different diseases reported by the two schools, and also the relative number of physicians of the two schools reporting work. From it, we learn that Philadelphia, St. Louis, Baltimore, Cincinnati, Detroit, Minneapolis, Rochester, St. Paul, Kansas City, Providence,

Denver, Indianapolis, Syracuse, Nashville, Dayton, Duluth, Seattle and Lincoln report from all causes: Allopaths, 72,477 cases to the Homœopaths' 10,570; ratio, 6.86 to 1. There are in these cities: Allopaths, 6649; Homœopaths, 1008; ratio, 6.59 to 1.

Cities reporting typhoid fever cases give cases reported: Allopaths, 8265; Homœopaths, 1131; ratio, 7.31 to 1.

Physicians in the same cities are: Allopaths, 4979, Homœopaths, 776; ration, 6.42 to 1.

Cities reporting scarlet fever give cases reported: Allopaths, 17,340; Homœopaths, 3039; ratio, 5.71 to 1. Physicians in the same cities are: Allopaths, 6534; Homœopaths, 992; ratio, 6.59 to 1.

Cities reporting measles give cases reported: Allopaths, 8656; Homœopaths, 1098; ratio, 7.88 to 1. Physicians in the same cities are: Allopaths, 2988; Homœopaths, 347; ratio, 8.61 to 1.

Cities reporting diphtheria give cases reported: Allopaths, 8765; Homœopaths, 1141; ratio, 7.68 to 1. Physicians in same cities are: Allopaths, 4498; Homœopaths, 598; ratio, 7.52 to 1.

Cities reporting cases of labor give cases reported: "Allopaths, 31,488; Homœopaths, 4219; ratio, 7.46 to 1. The same cities have of physicians: Allopaths, 3347; Homœopaths, 434; ratio, 7.71 to 1.

Table No. 9 (from Form No. 3).—This table deals with deaths alone as reported by the two schools, and for the reason that in all the larger cities a death certificate must be given before a body is permitted to be buried, this is the most reliable table given.

The deaths are given under the headings of "Deaths from Acute Stomach and Bowel Diseases," from "Acute Respiratory Diseases," and from "All Causes" (exclusive of deaths from violence, suicide, and coroners' cases). Under the heading of "Death from Acute Stomach and Bowel Diseases," we find St. Louis, Baltimore, San Francisco, Cincinnati, Detroit, Minneapolis, Rochester, St. Paul, Kansas City, Providence, Denver, Indianapolis, Allegheny, Syracuse, Nashville, Dayton, Duluth, Seattle, and Lincoln report: Allopaths, 8786; Homœopaths, 618; ratio, 14.22 to 1. Under the heading of "Deaths from Acute Respiratory Diseases," we find the same cities report: Allopaths, 12,678; Homœopaths, 866; ratio, 14.63 to 1. Under the head of "Deaths from All Causes:" Allopaths, 64,287; Homœopaths, 4854; ratio, 13.24 to 1. Compare

the ratios with the ratios of cases reported in the same cities, 7.1 to 1, and of physicians reporting 7.5 to 1, and judge for yourself who are signing death certificates.

Taking a general survey of the tables, there are a few points which seem to me to especially merit our attention. And of these I would place first the fact that with the exception of measles, our best showing is made on tables of the greatest apparent reliability, and the worst on those which, from their extremely high mortality per cent., we believe to be the most imperfectly reported. It is a fact that any one who will make some inquiries can readily verify that typhoid fever cases are not recorded with anything like the care they should be. This is astonishingly true of our men in many cities, as note Baltimore, in 1891, reporting five cases and eight deaths; in 1892, reporting no cases and seven deaths; also note Cincinnati, with its three cases and eight deaths,—all reporting more deaths than cases. Different reporters stated that the Homœopaths reported more cases after death than did the Allopaths. Diphtheria is almost an exact parallel of typhoid fever, both in relation to the number of cases reported and to the comparative results between the two schools. It should be noted in this connection that these are the only diseases in which the Homœopaths do not report more cases per physician. If the death ratios are compared with the number of physicians reporting, we make a much better showing than through percentages, as witness: All cities reporting cases of typhoid give death ratio 9.1 to our 1, while the ratio of physicians in the same cities is 6.4 to 1. In diphtheria, the ratios are: Deaths, 8.7 to 1; of physicians, 7.5 to 1. These two diseases will bear some study which we do not have time to give. It would be interesting to know something of the comparative success of men of our own school. This was out of the question, and at best would be very difficult to get at. It has incidentally come to my knowledge that in two cities with 325 Allopaths and 60 Homœopaths, in one, one physician changed our mortality per cent. in typhoid from 16 to 28, and in the other city one physician changed our mortality in diphtheria from 13 to 43 per cent. In both instances the men are noted among their medical brethren for their crude and un-Homœopathic methods of practice, but they sail under the flag, and their work is included in these tables, as is the work of all physicians who claim to be Homœopaths.

In Table No. 6, *Obstetrical No.* 2, it is interesting to note that our best relative showing is in connection with puerperal septicæmia, where the ratio is 21 to 1, and with puerperal fever with the ratio 23.45 to 1, while the ratio of cases treated is 7.46 to 1, or, in other words, their loss from the same number of cases of labor attended is 3 to our 1.

In Table No. 9 we have seen that the Allopaths lost, from acute stomach and bowel diseases, 8786 to the Homœopaths 618; from acute respiratory diseases, 12,678 to our 866; and from all causes, 64,287 to our 4854; while they reported of all diseases treated, 7.1 cases to our 1. At the same rate they have to account for 4396 or a little over 50 per cent. of their deaths from acute stomach and bowel diseases, for 6529 or 54 per cent. of their deaths from acute respiratory diseases, and for 29,824 or 46 per cent. of their deaths from all causes. The population represented in this table is 4,607,066, or about $\frac{1}{15}$ of the population of the United States. Those of a speculative turn of mind may find it interesting to figure what this means if applied to the whole of the United States, and what it means in dollars and cents at the average value of a human life as fixed by the United States courts—between $5000 and $6000.

In conclusion, permit me to say, that while the elements of unreliability in the health office records cannot be laid at our door, the records being almost wholly in the hands of our opponents, there is a work in this connection which we can and should do. We should individually and collectively report all of our cases, and insist that all others, irrespective of school, shall do likewise. We should also insist that these cases be properly recorded. Then will such investigations as this be valuable.

Let us speed the day.

Notes for Appendix.

1. *Medical Reform*, Cockburne. See Boericke & Tafel's Catalogue, 1890, p. 128.

2. From Hardenstein's work. See Boericke & Tafel's Catalogue, 1890, p. 129.

3. Comparative Results in the Treatment of the Insane. See "Homœopathy and the Insane," by N. Emmons Paine, A.M., M.D., *New England Medical Gazette*, 1892. Also reprint.

4. Hare's *System of Practical Therapeutics*, vol. i.

5. "Cholera Epidemic of 1873 in the United States." Second Session Forty-third Congress, p. 35.

6. See *Minneapolis Homœopathic Magazine*, June, 1892. Also reprint.

7. To Eldridge C. Price is due the credit of interesting Dr. Thomas in this work.

8. The New York County Homœopathic Medical Society took up the work of filling Form No. 1, was at first refused permission to see the records; was upon further demands permitted to see the records, but cases were found to be so indifferently reported that the committee appointed to do the work decided that the report would, of necessity, be not worth the labor. Dr. William Watts, of Toledo, Ohio, promised to report that city, but was positively refused permission to see the records of the Old-School health officer, and living outside of the city limits, could not gain access by recourse to legal courses. Philadelphia was at first granted the privilege, but later was refused, and up to this writing is debarred from the records. Chicago, Boston, and Cleveland commenced the work too late to be completed for this report. Washington, D. C., reported records hard to get at and not reliable. Omaha, Buffalo, Louisville, and Memphis promised reports but forgot to fulfill their promises. Owing to circumstances not in our control, the reports in many of the cities are far from full. In some instances men who promised to do the work delayed until it was too late for them or any other to make full reports. The reports received are given in the different tables, and what any particular city reported, can be seen by examining the different tables.

9. In all tables the coroner's cases are not included. City physicians are left out when ascertainable.

10. Cases are reported, but Dr. Keeler says, in such manner that he could not ascertain who reported them.

Discussion.

Dr. Beckwith: May I ask why Boston, New York, and Chicago were omitted from the table?

Dr. Strickler: The Boston Homœopathic Medical Society took up the subject in January, I think. The man who was to report was Dr. Porter, I believe. He wrote me long ago that he would send in a report. The report has not been received.

New York attempted to get into the Health Office sometime in

January or February, and were at first refused permission to examine the records, but on further demand were given the privilege, but found them so imperfectly reported that it was not worth the time and trouble.

There is somebody in this hall I presume who can answer about Chicago, but I had a definite promise that Chicago would be reported last June. I depended upon that promise until it was too late to find any one to report it.

DR. BECKWITH: Cleveland?

DR. STRICKLER: The same with Cleveland.

DR. BECKWITH: I was consulted by the committee, and I said, "If we present papers, we want some authority." Consequently they hired a clerk in the health office and she is at work on that now, and when it comes out it will be signed by the health officer.

DR. PECK: The importance of this subject no one will gainsay, but few have any idea of the amount of labor involved in the preparation of the paper to which you have just listened. I myself would not undertake it for any consideration. In compiling the statistics of Providence which had 135,000 in 1891 and 138,000 inhabitants in 1892, it took my copyist at least one month of working hours in order to prepare the returns simply for the chairman of the committee. The difficulties I found in the health office and in the preparation of such a report were, that the facts are not to be found ordinarily in the health office. I had no trouble at all in getting the documents in my own city, but the trouble was the different systems of registration. I wonder at the table we have here. I never should have arranged such a scheme, but since the Empire City has decreed it, of course, I had to accept. To illustrate: The paper called for statistics on diphtheria, including membranous croup. I flatly refused to include membranous croup death certificates in those of diphtheria, because I do not believe the two diseases are any more alike than a rose and a cabbage. Both grow on a stalk, both have leaves, and both may be eaten; therefore, they are identical.

Furthermore, the cases of croup are not reported; the cases of diphtheria are pretended to be. One of my particular friends who is a rising surgeon in my city, gives a number of deaths equal to the number of cases. His death-rate for typhoid fever for the year 1891 is 100 per cent. I think that he would feel very happy to have that statement publicly made. It simply shows how doctors generally neglect to comply with the law. There were two or three such cases. I found in one year that I continued the examination, that the Allopaths were fully as delinquent as the Homœopaths, frequently not mailing their certificates of the disease until they had made out the death certificates.

With regard to infectious diseases, this heavy mortality record is due to that fact. I do not believe myself, while recognizing the fact

that a person may be taken so ill with scarlatina that he is as dead the day he is taken sick as he ever subsequently becomes, that that disease is productive of serious results except from sheer neglect or carelessness. That is my experience.

With regard to obstetrics in our State, the showing is very good, and I think it will be found so in every State, and I ascribe that to extra care that is undertaken from personal observation and knowledge of the practice of leading members of both schools. We live on terms of comparative harmony in our city, and while we have as poor specimens of doctors as the other school can show, yet the increased care and attention and fidelity to duty which characterizes the Homœopath who is a Homœopath from principle shows itself in the lying-in chamber, and that is the cause of our small mortality.

Our showing is very good also in croup and in respiratory and bowel troubles.

The reports of death certificates from our city are all taken only from members of the Rhode Island Medical Society, and Rhode Island Homœopathic Society. Anybody can practice medicine in our state who wishes, and I thought the only fair way was to take the certificates of those who were recognized officially as members of their respective societies.

The practical lessons to be derived from this paper are as follows: First, comply with the laws of the cities in which you reside; show yourself a good citizen, else you cannot expect to be rated as a good doctor. You don't know who is going to examine your death certificates, nor for what purpose they will be used; make them out, then, in this manner: If you are not sure, and you know we are not always sure of the cause of diseases; if there is any doubt—sometimes, of course, the manner of death determines the diagnosis—always make it out for that cause which is considered incurable, unless that diagnosis impairs the prospects of the family with regard to life insurance. Protect the interest of your school as you would your own interest.

THE CHAIRMAN: Further discussion will be by Dr. Beckwith, of Cleveland, Ohio.

DR. BECKWITH, of Ohio: The State Board of Ohio, of which I was a member for five years, spent much of their time trying to gather statistics, and we found it impossible. I don't believe there is a State in the United States that has statistics, neither do I believe that that report is correct. Details are reported which are not correct. While this paper has required a vast amount of labor, I do not believe half of it is correct. I will admit that our school is much more successful, and why? Because we have a better class of patients; we have better nurses, and we have a better class of society to treat. We have every advantage that we possibly can have, consequently I look upon the statistics as rather unfair to the Old

School because they give but little medicine now. I think they are giving very little more medicine than our school, and their success is much better now than it was before.

The mortality in those cases it seems to me is enormous and why? Because it is down among the lower classes—the Norwegians, Danish and Swedes that have no care or attention whatever.

The only way to make the world and the Allopaths believe this is to get it from the health authorities. None of you would take my statement or that of any other physician in regard to such figures, especially when their views are different. Dr. Wilson, of Cleveland, spent one week with an assistant getting statistics; then gave it up and wrote, as many others have done, to Dr. Strickler, that he would send it later. Then they got a clerk in the health office who is doing it correctly, taking every physician and his certificate.

THE CHAIRMAN: The paper will be further discussed by Dr. Edgerton, of Kansas City.

DR. EDGERTON, of Kansas City: We have spent a great deal of time on this work in Kansas City. I got a lady to go to the health officers who very kindly allowed her the use of the books, but we found it very difficult work to make any creditable statement in puerperal cases, deaths due to confinement. The death was simply reported, giving the name of the disease from which the patient died, but saying nothing as to whether it was immediately following confinement. I found a tendency, and I noticed it more among the Allopaths, to put down a disease which had the most dangerous form. For instance, a short time ago I was called to a case that an Allopath had seen and he pronounced it cerebro-spinal meningitis, and I found a little rheumatism there. Cases that are simply German measles are called scarlatina and the house is placarded. I believe the Homœopaths are more careful about these things.

THE CHAIRMAN: The discussion will now be closed by Dr. Strickler.

DR. STRICKLER: I don't know as I have much to say in closing this discussion. The conclusion of my paper will be ample.

THE CHAIRMAN: The next business is the paper by Dr. Martha A. Canfield, of Cleveland, Ohio, on "The Development of Medical Science through Homœopathy."

Dr. Canfield addressed the Congress as follows:

ADDRESS.

THE DEVELOPMENT OF MEDICAL SCIENCE THROUGH HOMŒOPATHY.

By Martha A. Canfield, M.D., Cleveland, Ohio.

The true scope of medical science is the healing of the sick, the relief of human misery. Tried by this test, there was no real medical science in the world until it was evolved from the law—*similia similibus curantur*. Before this all was blind experiment, all disorder and confusion, and to the pangs of disease were added the tortures of the damned. Disease was regarded as some evil spirit which had possessed the body. Some infarct, which had lodged in the bowels and must be driven out by purging or let out by the lancet. The wildest and most absurd definitions were given, *e.g.*, an infarct was defined by Kampf, in 1726, as an unnatural condition of the bloodvessels, which are plugged in various places by ill concocted, variously degenerated, fluid bereft inspissated, viscid, bilious polypus and coagulated blood. Heinrech Speffens, who, in Oken's periodical, 1822, is put on a level with Aristotle, Goethe, and Humboldt, thus defines hearing. It is the identity of the inorganic of the organization and its internal being, consequently identity of the nervous and osseous systems. Hunger is internal tension of the assimilation under the influence of the mass opposed external.—Ameke's *History of Homœopathy*.

In 1803 physiological chemistry taught that blood consisted of nine ingredients: odoriferous matter, fibrinous parts, albumen, sulphur, gelatine, iron, potash, soda, and water. The medical history of the times down to the date of Samuel Hahnemann's appearance upon the field of action is a whirligig of theories, one following upon the other with astonishing rapidity.

Stoll taught that disease was caused by gastric impurities, bilious conditions, and intestinal obstructions; therefore, vomit and purge was his watchword.

Brown that sthenia and asthenia caused all disease, and "allay irritation" was his war cry. The antiphlogistic treatment contended for supremacy, but, whatever theory was uppermost, poor old humanity was blistered and bled and salivated and purged with intent to drive out some unseen, unknown evil thing which was supposed to be its enemy.

All experiments of the actions of drugs were made upon the sick. Drugs were compounded in mixtures of from eight to fifty remedies, so that it was impossible to separate the action of one drug from the other or from the symptoms of the disease. In this absence of law and order, in this extremity of the human race, the phenomenon which always appears at such a crisis was repeated. A man was raised up who was equal to the emergency, Samuel Hahnemann. He established a system of perfect law and order. The fact that the poisonous effect of drugs can be used as the determining indication for their selection in the treatment of disease was dimly seen by the ancients, but Hahnemann seized upon the fact and dragged it into the light of perfect day. He demonstrated that it was the foundation rock of medical science; that it was a fixed and perfect law which never can be altered or improved, though its methods of application may be almost endless. Upon this rock he built a Materia Medica.

He was no common man who, in the error of his age, could see so clearly. It is true he partook somewhat of the color of his times, but illumined the age with a wondrous light. He adopted an entirely new method of determining the curative power of drugs, viz., proving them upon healthy organisms,—the method now approved of and practiced by all scientists.

He discovered that certain remedies had specific action upon certain tissues and curative action in certain diseases. As a chemist, he far surpassed the age in which he lived. He discovered a test for metals which has stood the test of time, and is used in every laboratory in the world to-day. He discovered several new products, among them the black oxide of Mer., our Mer. sol. He was the first physician in the world to advocate single remedies and small doses, to regard diet and hygiene as important in the treatment of the sick. Was not this a legacy to medical science? Was not this the birth of medical science?

My second proposition is that there has been no progress in the

therapeutics of the dominant school since the glorious truth of Homœopathy burst upon the world, except as it has been developed upon Hahnemannian principles or stolen outright from our system without credit being given.

It is quite possible to set the world agog with some wonderful discovery, as did Brown-Sequard's Elixir of life, and yet contribute nothing to medical progress, because it is soon proven to be not only worthless but harmful. All the so-called scientific discoveries, as Brown-Sequard's Elixir, the coal-tar compounds, and the late Dr. Hammond's vital energizer, may be classed among the harmful discoveries, and therefore have no weight in the argument. Hahnemann built the tramway upon which all great lines of thought have been projected in both the Allopathic School and our own. Rokitansky, Virchow, Klebs, and Koch are indebted to him for the principle upon which they elaborated their thought.

Hahnemann had discovered, as before mentioned, that certain remedies had a specific action upon certain organs and tissues, as Digitalis upon the heart.

And it was upon this basis that Virchow wrought out his localization theory. Hahnemann anticipated the germ theory when he discovered the essential germ cause of cholera. Koch even wrought in the self-same methods as Hahnemann. He tested the poisonous matter upon healthy organisms, then diluting the poison infinitesimally, he tested it upon diseased organisms, differing only in the method of administration, using injection aided by the mechanical improvement of his day. The most recent discoveries of Koch regarding the blood of diphtheria and typhoid containing elements which are curative in each of the diseases referred to show that the gleaner is going on in the fields already harvested by our school. Hering had proved the worth of Tuberculinum when Koch was in pinafores. He also advocated the use of Hydrophobin sixty years before Pasteur rediscovered it, also Psorinum.

Homœopaths have enriched medical science by proving drugs of commerce, which were before considered inert, to be capable of curing disease. They have antedated the use of the diseased products of the human body as curative agents. And another most wonderful development entirely due to Homœopaths is the demonstration of the fact that various animal viruses will heal the sick. This was never dreamed of by the Allopathic School, and they have not yet

stolen these remedies, to my knowledge. This enables the Homœopath to wield incalculable vantage over them in a treatment of all malignant diseases, as typhoid fever, diphtheria, erysipelas, etc. The animal viruses, as Apis, Crotalus, Lachesis, Naja, Tarantula, Theridion, Bufones, etc., have proven of untold relief to human misery, and are entirely due to the heroic provings of Homœopaths. Constantine Hering enriched medical science by his labors along this line.

Hering, like many of Hahnemann's followers, was a very learned man. He was a wonderful naturalist. The collection which he made at Surinam is preserved with great care in the Academy of Natural Sciences in Philadelphia.

There are numbers of individual remedies which owe their use entirely to Homœopaths, and are now used by Allopaths, no credit being given for their use, as Aconite, Pulsatilla, Rhus tox., Mercurius, Glonoine, Hepar sulphur, etc. Many of these remedies are recommended in their text-books—Ringer, Shoemaker and Phillips —with long paragraphs of Homœopathic indications so plain that you would suppose you were reading Hughes or Arndt.

These indications have been garbled from our literature with the most impudent kind of plagiarism, viz., Chamomilla is recommended by Ringer in summer diarrhœa of children, characterized by green, many-colored stools, Podophyllum in bilious morning diarrhœa. Dr. Aulde, of Philadelphia, recommends Rhus tox. in rheumatism in doses of one part to ten, but expresses diffidence in giving his opinion concerning a remedy so altogether new, notwithstanding it was carefully proven by Hahnemann, as every Homœopath well knows. They give Rhus tox. for rheumatism, Pulsatilla for dysmenorrhœa, and Aconite for fever, but do not differentiate between these remedies and adopt the one which fits the individual case. Therefore, while they acknowledge the propriety of proving drugs upon the healthy, use our remedies and our dose. (Their medicine cases are full of semi-potentized triturate tablets and parvules.) They are not making the progress they would seem to be making, because they are not using these remedies homœopathically but empirically. These facts are too well known to this Convention for me to enlarge upon the subject.

In the face of the most unjust opposition and cruel persecution known in the annals of history, we have forced the dominant school

to reform its methods and adopt a gentler and more humane system, and have won to our belief such a majority of the power and intelligence of the laity that should the earth open to-day and swallow up every Homœopath, public opinion would protect the world from the barbarism of the past.

Our school has made wonderful strides of progress on its legitimate line, developing methods by which the fixed and perfect law may be perfectly applied. We have refined and regulated the dose; we have proven new remedies, thus narrowing down the list of incurable diseases. Hundreds of volumes are monuments of the devotion and industry of our pioneers. See Bradford's *Bibliography*. These works form a vast pyramid, with Hahnemann's *Organon* and *Materia Medica Pura* as its base, with Jahr and Reckert and Teste and Hempel and Baehr and Carroll Dunham and Farrington and Hughes and Drysdale and Cowperthwaite and Hale and Arndt and Lippe and Burt building upon them, with Allen's *Encyclopædia* and the *Drug Pathogenesy* towering above them all. And now Hughes is fashioning the capstone, his repertory of the *Cyclopædia*.

Our literature is a stupendous growth. It embraces whole libraries of volumes which it would require a lifetime to peruse—not only exhaustive treatises upon our therapeutics, but elaborate discussions of every phase of medical science, even dipping deeply into psychology and spiced with poetry. See Holcombe's, Raue's and Buck's classical works and Crawford's *Kalevala* and Bushrod James's *Alaskana*. Bradford's *Bibliography*, itself a notable book, chronicles the long list of authors too numerous for me to mention.

Our growth may be compared to that of a grand oak, Hahnemann the central trunk, Similia the main root, his great followers the spreading branches, and the thousands of twigs the faithful practitioners who are devoting their lives to the application of Materia Medica to disease.

Seventy years ago there was but one Homœopath physician in the United States; to-day there are twelve thousand. We have sixteen colleges, graduating five hundred students annually. These colleges were the first medical colleges in the country to establish a four years' course of study and demand a thorough preparatory examination. The American Institute was the first national medical society to demand of the colleges under its control a lengthened course and higher grade of scholarship. These colleges have adopted the most ad-

vanced methods of clinical teaching. They have always been in the front rank of progress. Let me here acknowledge that it was a Homœopathic college which first opened the doors of medical colleges to women.

We have seventy-six hospitals and fifty dispensaries. In these hospitals the average mortality is only 3.12, they are in perfect sanitary condition, for Homœopaths were first to advise strict care in regard to hygiene and diet, and Listerism is nothing more than absolute cleanliness. Our pharmacies have such a reputation for the purity and exactness of their preparations that they are patronized largely by careful physicians in the Old School.

The law of cure is a grand central figure around which revolves lesser lights. Dr. Edwin Hale has discovered and demonstrated a law of dose which he deems a corrollary to the law of cure, viz., when the primary symptoms of a drug resemble the primary symptoms of a disease the minimum dose should be used, and when the secondary symptoms resemble the secondary symptoms of disease, large or physiological doses must be used.

The late Dr. Tessier placed on a firm basis the fact that individual attacks of disease owe their explanation to the definite predisposition which exists in the individual.

Dr. Woodbury, of Chicago, has elucidated a system of succession of remedies which is about to be given to the medical world in book form.

Dr. J. S. Mitchell has given us a special treatment for cancer. He is not a cancer specialist, but by scientific investigation has discovered a method of treating this loathsome disease, which has been followed by wonderful results. His treatment is Homœopathic, his method of applying the remedies only is original. See *Medical Era*, May, 1889.

Dr. Henry Garey, of Baltimore, Md., has devised a system of massaging the sound-conducting apparatus of the middle ear, by which treatment he claims to have produced marvellous results in cases of deafness heretofore considered hopeless. — *Transactions* of American Institute, 1892.

Dr. Pratt is the father of the orificial philosophy for which he claims that it is the discovery of the cause of chronic diseases as a class, and that by the aid of orificial surgery which it implies, it is possible to cure four-fifths of all forms of chronic disease. If this

is true, and testimony pours in from every quarter, this marks a marvellous progress in the prevention and cure of disease. Our French contemporaries have stamped out anthrax among cattle and sheep by the use of anthrax.

Our Dr. Dudgeon has devoted much study to optics and written valuable works upon the subject. See *British Journal of Homœopathy*, 1882 to 1893.

Our Dr. Blackley, Manchester, Eng., is the highest authority in the world concerning hay fever.

By gathering atmospherical dust on glass with glycerine he determined the pollen origin of this disease. His work upon the same is classical.

The late Dr. Drysdale, Liverpool, Eng., was one of the most eminent pathologists, biologists and microscopists of the age, as well as one of the most ardent lovers of Homœopathy and logical expounders of its law (see *British Journal of Homœopathy*), during the last thirty-five years, all of which period he was the senior editor, and did a great amount of valuable work in the study of drug action. He made a study of the germ theories of infectious diseases as early as 1878, anticipating much of the work which Pasteur has since developed. He gave eight years of his life to the study of the life histories of monads, now known as saprophytes. The words of his friend and fellow-student, Dr. Dallinger, give us an idea of this work. "Our work in this inquiry, extending through night and day observations, occupied eight years, and during that time, by use of the most powerful and perfect lenses constructed, we were enabled to study the cycles of life in these minute forms, and to show that their life history was as definite and prescribed as the life history of a butterfly or a daphnia, although they were so small that a hundred million might revel in the space occupied by a millet seed. And this research proved that abiogenesis, or spontaneous generation, has nothing to hope from a thorough knowledge of saprophytic organisms."

To show the versatility and eminently practical character of his genius, I cite the fact that he made a study of the subject of ventilation, and jointly with Dr. Hayward, a deeply scientific colleague, wrote a most valuable book on *Health and Comfort in House Building*. No man in our age has added more to the sum of knowledge in medical art and science than John James Drysdale. For a com-

plete study of his work, see the *British Homœopathic Review*, September, 1892.

Therapeutics and pharmacy will always be the legitimate field for Homœopaths. The majority of our ablest men will devote their lives to adapting the Materia Medica to the cure of disease, and this is the height of wisdom, for, given the certain law of cure, close application of methods according to this law will in the majority of cases prevent the necessity for surgical interference, and when the surgeon takes up the scalpel it is an admission of weakness. He practically says I cannot restore the body to health, therefore it is better that it should lose one member than that the whole body should be lost. Surgery should be the *dernier ressort* and Homœopathy has made it so. It has greatly modified Allopathic surgery. Mortality has greatly decreased under surgery, aided by our therapeutics and in our hospitals which are models of hygienic perfection.

Our surgeons have performed many brilliant operations and have done much original work. Dr. G. D. Beebe was the first surgeon to remove several feet of intestine (58 inches) and get end-to-end union with recovery of patient.—*United States Medical and Surgical Journal*, 1869.

Dr. I. T. Talbot, of Boston, was the first surgeon in America to successfully perform tracheotomy. Van Lennep of Philadelphia, has done great things for intestinal surgery, experimenting on dogs, making resection of gut with end-to-end union, using rubber tubing as splint instead of decalcified bone, and has tested the method on human cases with the best results. He has improved the operation for fistula in ano and done much good original work.

Dr. Flagg the first President of the American Institute, revolutionized the science of dentistry by his methods of operating and invention of instruments. Dr. Lungren of Toledo, was the first surgeon to bring the peritoneal surface together in the closure of the uterine incision in Cæsarian section and published the method several years before Sanger made use of it as the basis of his improved Cæsarian operation, which is the approved method at the present time. Dr. Lungren also first ligated the fallopian tubes without removal to produce sterility after having twice peformed the Cæsarian section upon the same patient.

Biggar, of Cleveland, also has witnesses of his great skill in a

living mother with two fine children delivered at different births by Cæsarian section. He has a new method of forming the flaps in exstrophy of the bladder. His method of repairing the perinæum is worthy of note, and an original method of covering amputated bone with periosteal flaps for which he claims three benefits: 1. Protection. 2. Medium of nourishment. 3 More rapid healing and less deformity.

Dr. Knoll, of Chicago, has made several advances in surgery. 1. He has an original operation for radical cure of fistula in ano by dissecting out all the diseased tissue which forms the canal and stitching up the parts, first advocated in 1887. 2. An operation for the radical cure of hernia, consisting in opening up the canal to the peritonæum, freshing the edges of the whole ring and stitching the parts together with heavy silver wire.—*Medical Era*, July, 1888. This operation he claims is in advance of any other operation of the kind even up to the present date. 3d. His treatment of eccentric stricture of the œsophagus by the stylet and dilators method of using and cut of the instrument.—Sharp and Smith's *Catalogue*, Chicago, 1893.

Lee, of Rochester, has a wonderful record in laparotomies. See *Transactions*, American Institute, 91.

N. Schneider, of Cleveland, has the honor of being the first surgeon in America to remove a tumor from the brain with recovery of patient. This tumor was the size of a walnut, situated back of the orbit. The operation was reported in 1860, in the Ohio *Medical Reporter*, and was copied in the New York papers and acknowledged to be unique.

Dr. Schneider introduced to the profession the use of carbolized oil in the dressing of wounds. It used to be known on the road, in his days of railroad surgery, as Schneider's oil.

It is probably true that the modern treatment of wounds is a growth which all surgeons have nourished and cultured, but the following statement was made to me by Dr. Dudgeon, of England, in reply to recent inquiries as to the part taken by our foreign brethren in the development of medical science, viz., that Dr. Bolle, a Homœopathic physician of Aix la Chapelle was the father of the modern treatment of wounds.

In a recent number of an Allopathic journal, the *Medical News*, there appears a Columbian article upon the work of American sur-

geons, which, in the usual style, ignores the work of Homœopathic surgeons. Well might Helmuth sound the tocsin; it is time the history of Homœopathic surgery was written. But they cannot deceive the dear public. It well knows that we have a galaxy of surgeons, with Helmuth as Nestor, who have made Homœopathic surgery honorable the world over.

In mechanical therapeutics, our surgeons have invented many appliances of recognized value. Dr. Dudgeon's sphygmograph is acknowledged to be the very best instrument of the kind in the world. Garey, of Baltimore, has invented the instrument called the vibrinator, for massaging the sound apparatus of the inner ear, which is destined to be of incalcuable value to the afflicted.

The protection sheet which is now used in all the hospitals for the insane, and which has banished camisoles, cribs, anklets, straitjackets, and all other cruel restraints of iron, wood and leather was invented in the Middletown, New York, State Homœopathic Hospital, under the suggestion of Dr. Seldon H. Talcott.

Dr. Edwin Hale has invented a bivalve expanding speculum which is now used by both schools in the United States. Also the pistol-handle forceps for which he claims that the line of traction and the curve of the handles make it equal if not superior to Tarnier's.

Dr. Griswold Comstock has invented a pair of obstetrical forceps which are a great favorite with many physicians. Dr. J. C. Morgan, of Philadelphia, has invented an apparatus for fracture of the clavicle which is acknowledged to be the best ever devised. He was also in advance of all others in using and publishing the aluminium probe now in universal use. He also invented a vectus which has saved the lives of many babes after uniform previous mortality, and many other instruments. Dr. Campbell, of St. Louis, has invented many eye and ear instruments. Dr. Pratt, of Chicago, whole sets of orificial instruments. The late Dr. Sebold devised the neatest and most ingenious speculum forceps and scissors for operating upon the eye that ever was invented.

Dr. Harold Wilson, of Detroit, has invented several important eye and ear instruments.

Dr. Knoll has invented several valuable instruments; 1. The large bivalve rectal speculum, which with slight modifications is now sold everywhere and frequently is called the Pratt speculum. 2. An

artery forceps which is the strongest, most reliable instrument of its kind made. 3. A punch forceps for skull operations.—*Century*, January, 1893. 4. The stylet and dilators for stricture of œsophagus and urethra.

Dr. S. L. Hall, of Cleveland, has devised a very ingenious apparatus for remedying a deflected nasal septum. It is able to metamorphose a badly deformed nose into one of the purest Grecian type.

Dr. George Gorham, Albany, N. Y., has invented an apparatus for treatment of Pott's disease which is acknowledged to be a valuable appliance.

Dr. E. D. Baun, of Passaic, N. J., has invented an attachment for the bedstead with ropes and handles for the use of women in labor, which is valuable, also an insufflator for the resuscitation of asphyxiated infants at birth which is very successful.—*North American Journal of Homœopathy.*

Horace Ivins, Philadelphia, has a nasal speculum which is good. See his recent book on *Nose and Throat*, p. 15.

Bushrod W. James has invented several good things.

Dr. Edward Blake, of England, has introduced a rhinometer for measuring the depth of the nasal cavity and destroying adenoid growths.

Dr. Horace Packard, of Boston, has improved and invented a number of surgical instruments, but is known of all schools for his appliance for administering ether. By his method the same effect is produced by a drachm which formally required ounces; thus he became a benefactor to the thousands of suffering humanity, who must take the risks of anæsthetics.

To recapitulate, there was no true medical science until Homœopathy was introduced. Allopathy was not true medical science because it did not cure the sick, or alleviate human misery, but rather added to it new tortures.

Homœopathy discovered a true law of cure, proved hundreds of drugs, animal viruses, and diseased products to be able to relieve human misery. It built up and is constantly improving a Materia Medica, which applied to disease, is capable of restoring the sick to health. Allopathy has made no progress except as it has developed Hahnemannian principles or stolen outright from our system. Homœopathy has made wonderful strides of progress and greatly influ-

enced all medical practice. It has written libraries, founded colleges for the teaching of its system, and hospitals for its practical demonstration, and the relief of human misery. It has compelled the dominant school to cease its vampireism and to adopt our methods, our remedies and our dose; it has educated the laity in regard to their own physical being and the superior claims of Homœopathy; it has improved surgical therapeutics and enriched mechanical therapeutics; and in short has been of more benefit to humanity than all other discoveries the world has ever known.

Discussion.

The Chairman: Dr. Hawkes, of Liverpool, England, wishes to speak on this paper.

Dr. Hawkes: I am exceedingly sorry that I was away when I ought to have spoken. Nothing illustrates the completeness of this paper more than the few touches our friend has given of our lamented friend's work, which is as complete as anything I could have written. If we were to speak in our country of lady doctors and the work that thay can do, or discuss that matter in our medical societies and tell them of this paper to which I have just listened, it would be almost incredible to them. Not that our friends there, as a body, or as Englishmen, do not appreciate the abilities of women; but it is not yet conceded over yonder that medicine is exactly her sphere. If they could have heard that paper read that argument would lose very much of its force.

I am astonished to gather from her paper what has been done by Homœopaths in this country, and, although I profess to know a little of medical literature, I must admit that very little could be added to the paper by anybody with whom I am acquainted. Skinner, as you know, invented that apparatus that I see is used very much here for giving chloroform, but that was before he became a Homœopath. I think we must go back to this fact that what Hahnemann taught us and what his followers had insisted upon is this: the proving of medicines and the application of those substances that were never employed as medicines at all until Homœopathy came to the front, which feature of things they ought to be most thankful for. What Homœopathy has gained will go to form a monument to Hahnemann which no power can destroy and which no time can efface.

The Chairman: The hour for adjournment has arrived, and the Congress now stands adjourned.

At three o'clock P.M., meetings were held by the Section in Clinical Medicine and the Section in Mental and Nervous Diseases.

FIFTH DAY'S SESSION.

SATURDAY MORNING, June 3, 1893.

The final meeting of the Congress was called to order at 10.30 by Dr. J. S. Mitchell, of Chicago, President.

On motion, the following resolutions were unanimously adopted:

Resolved, That the thanks of the Congress be extended to Dr. J. S. Mitchell, our President, for his very successful efforts in preparing for, and dignity in presiding over, our sessions; also to Dr. Wesley A. Dunn, our Secretary, for his very efficient labors.

Resolved, That our thanks are due to the editor and publishers of the *Daily Medical Century* for their enterprise in the publication of our proceedings and roster from day to day.

Resolved, That the thanks of the Congress be tendered Dr. Emil Schlegel for copies of his report on the Clinic at City of Tübingen; to Dr. C. Hurtado, of Curacoa, for copies of works on Botany; to Dr. Louis Paez, Bogotá, for copies of reports; to Tommaso Cigliano for copies of works on Materia Medica; to Dr. Alexander Villers for copy of directory of foreign physicians; to Dr. B. N. Banerjee for reports; to Dr. Richard Hughes, of Brighton, England, J. W. Hayward, Liverpool, Edward Adams, of Toronto, for special work to insure the attendance of foreign delegates.

DR. JAMES: Mr. Chairman, it seems there is very little work for this morning, and this afternoon's business might as well be included in this morning's session, so that we can finish up our work and adjourn. I would move that we go into sectional meeting, and take up all the unfinished work, and remain in session until both the morning and afternoon's work is completed.

The Congress so voted.

THE CHAIRMAN: The Section of Rhinology and Laryngology will meet in this room, and the Section of Pædology will meet in hall 29.

The papers at hand will be passed by their titles.

DR. E. M. HALE then presented a paper by Dr. Carlos Plata, of Bogotá, S. A. In introducing the subject, Dr. Hale said:

Mr. President and Gentlemen: I have the honor and the pleasure of presenting to you a short paper prepared for your consideration and sent to me by Dr. Carlos Plata, of Bogotá, Colombia:

For many years, perhaps twenty-five, I have been inscribed an

Honorary member of the Homœopathic Institute of Colombia, but, I regret to say, that my acquaintance with the country has scarcely gone farther. Let me remind you, as well as myself, at this moment, that the United States of Colombia includes within its territory the only continental ground touched by the foot of Columbus, he having given the name of Veragua to what is now the northwestern province, on the Isthmus of Panama, from which province he and his descendants (one of whose distinguished members we have now among us) took their ducal title.

Colombia is not insignificent in size, being equal to our New England and Middle States, the Virginias, the Carolinas, Ohio, Tennessee, and Kentucky; having a coast-line of a thousand miles, an enormous river system, and mountains rising to a height of 23,000 feet, although under the equator. Consequently, all varieties of climate are here exemplified, although there are no seasons, strictly speaking, the name of summer being given to the dry, and winter to the rainy periods, which alternate at intervals of sometimes three months, sometimes six months, while, sometimes, summer is almost unceasing.

There are nine departments, or states; the capital, Bogotá, being situated in about the middle, at an altitude of 8564 feet, with a charter granted by Charles V., and a population of 140,000. From the valuable bulletin on Colombia, issued by the Bureau of American Republics, at Washington, I learn that, besides its elegant cathedral and one of the handsomest theatres in America, it contains a university, with faculties in medicine, law, natural sciences, and engineering; a large central pharmacy, and two Homœopathic journals; a museum of antiquities, and an astronomical observatory founded by a celebrated scientist named Mutis. The capitol building is handsome and well kept; the dwelling houses are comfortable, the streets are paved, and there is a good system of sewers. There are three parks, in one of which is a monument to General Bolivar. The city is abundantly supplied with water, and the climate is delicious. It has a notable literary life, which is the more remarkable as both intellectual and commercial communication with the outside world is most difficult and expensive. But, in spite of being so inaccessible, its people seem to reach out to the life of the world, and we welcome to this Congress from Bogotá a message from so earnest and thoughtful a colleague as Dr. Carlos Plata.

Bogotá, Colombia, March 1, 1893.

To the President of the Congress of Homœopathic Physicians and Surgeons at Chicago,

Sir: Through the kindness of Dr. E. M. Hale, I present to this honorable body some remarks on Homœopathic medicine. In doing so, I modestly beg your indulgence for my little contribution, which I pray may be for the good of humanity and the service of science.

ADDRESS.

OBSERVATIONS ON SOME OF THE AXIOMS, APHORISMS, AND RULES OF HOMŒOPATHY.

By Carlos Plata, M.D., Bogota, Colombia, S. A.

"Life is the result of the incessant action of an invisible, immaterial, essential, and dynamic principle, of which the regularity and harmony of the functions constitute health, while their derangement and discord constitute disease."

This definition necessarily implies that if this functional harmony does not exist, in either its organic or spiritual relations, we must have discord. To me, this law appears almost universal. In towns from 1000 to 100,000 or more inhabitants, and in such a city as Bogotá, where I live, which has 140,000, I have investigated the state of health of many undoubtedly robust persons with the general result that they did not feel quite well; one had a headache, another indigestion, chills, remittent pains, etc.; apart, of course, from mental complaints of melancholy, forgetfulness, and hypochondria; all of which investigations prove my proposition.

A rule of logic teaches us to infer the unknown from the known; as by analogy, given the condition of a people living in certain climates and hygienic surroundings, we may infer the conditions of other peoples in the same circumstances, or as we may infer that pathological causes are more prolific in the city than in the country with its purer air, water, and food. What conclusions can be drawn from these observations? Simply, that mankind, as a body, is physically and mentally diseased, although a good external appearance may indicate perfect health, just as happens with fruits of good color, the interior of which is unsound.

In man, the two forces of conservation and destruction, health, and disease, are in ceaseless warfare, the end of which is death. The pathological state, whether latent or active, moral or physical, is a natural one.

Can the provings of medicines be obtained on a healthy person, since we have demonstrated that disease is inherent in life itself, and

that the very word life is relative to death, or merely a synonym for the constant transformation of matter?

Most probably until now, medicines have had to be proved on diseased persons, and the pathogeneses have not been obtained from healthy ones, consequently the diseased state produced was not artificial but rather a union with an organic pathological state.

Moreover, account must be taken of the purity or impurity of water, and the chemical atmospheric agents that may have an influence in producing new, or modifying old symptoms, and we must especially consider the individual temperament, the climate, customs, etc. How, therefore, shall we distinguish natural from induced disease, and how shall we obtain an absolutely pure drug in every sense of the word?

If two symptomatologies are recorded, one before, the other after taking the drug, the result will be particularized so as to destroy any general pathogenesis.

In the *Organon* of the immortal Hahnemann occurs this statement, "Only by means of repeatedly verified observations on a great number of individuals of both sexes suitably selected, can we arrive at a knowledge of the ensemble of morbid conditions which a drug is able to produce; that is to say, successive provings must give nearly identical results." This rule is very important, because it necessitates accuracy as to the symptoms produced by a medicinal agent or as to the power of a drug to alter and modify health.

The microscope has shown us that earth, air, light, and water, and even stones contain innumerable animalculæ, which chemistry can reduce to the original elements of carbon, oxygen, hydrogen, and nitrogen. How shall we know for certain, when we administer a drug, that it is this drug which has produced the cure, and not the chemical atoms which the drug contains? All that we are sure of is that the drug was not absolutely pure; hence we may conclude: That ideal health does not exist, and that provings do not constitute laws; that drugs cannot be prepared pure, and that pathogeneses cannot be generalized.

The vehicles for preparing Homœopathic drugs are alcohol, sugar of milk, starch, etc., because they are considered inert, but as we have shown that they contain, or themselves may be, medicinal substances, they cease to be inert and innocent to the economy, and for that reason they cannot serve as vehicles for pharmaceutical preparations.

According to the definition of physics inertia is a purely negative property, that is to say, it does not exist. Inertia is, in a certain sense, activity, hence any combination, however weak, develops a new body with a greater or less amount of released electricity, as, for example, the formation of a neutral salt by the union of sulphuric acid and an alkali. It has been likewise proved that each molecule has its own atmosphere; this being so, it is clear that each one of them is complex, although in an infinitesimal proportion; therefore, each molecule is an example of polypharmacy, since each, however small, is divisible into its elements which goes to prove that there cannot be inert or innocent substances.

If, in spite of all these obstacles, Homœopathy cures with such brilliant and surprising results, its triumphs will be still greater when these defects are overcome. It will be of immense advantage toward this end to publish a Homœopathic dictionary, well illustrated in the botanical and anatomical sections, and in at least four languages, English, German, French, and Spanish.

In conclusion we may state:

1. That man's natural condition is that of disease.
2. The word health is relative to the greater or less degree of disease.
3. An absolute proving is impossible where health is only relative.
4. Generalized pathogeneses are inaccurate.
5. Drugs are never absolutely pure, and this prevents certainty in effects.
6. Nevertheless, Homœopathy, the law of similars, is the only science which, by reason of its exact data, gives us more accurate results than the systems opposed to it have been able to obtain.

President Mitchell announced that the Section in Rhinology and Laryngology, and the Section in Pædology would hold their sessions at once. He then declared the World's Congress of Homœopathic Physicians and Surgeons adjourned *sine die*.

WESLEY A. DUNN, M.D.,
Secretary.

REPORTS OF THE SECTIONS,

INCLUDING THE

MINUTES OF THE SECTIONAL MEETINGS,

TOGETHER WITH THE

SECTIONAL ADDRESSES,

SCIENTIFIC ESSAYS

AND DISCUSSIONS.

REPORT

OF THE

SECTION IN SURGERY.

CHICAGO, ILL., Tuesday, May 30, 1893.

THE Surgical Section of the World's Congress of Homœopathic Physicians and Surgeons convened in the Hall of Washington at two o'clock P.M., and was called to order by Dr. J. S. Mitchell, President of the Congress.

President Mitchell announced that Dr. John E. James, of Philadelphia, Pa., Acting Chairman of the Section, was not yet present, and that, therefore, it would be necessary to elect a temporary chairman.

Dr. George F. Shears, of Chicago, Ill., was thereupon chosen temporary Chairman.

The Chair called on Dr. Horace Packard, of Boston, Mass., to read a paper on "Anæsthesia."

(At this moment Dr. John E. James entered the room and assumed the duties of the chair.)

Dr. Packard gave a brief *résumé* of his paper, and illustrated it by anæsthetizing a patient before the Section. (For these remarks, see the discussion following the paper.)

The subject was discussed by Drs. S. B. Parsons, of St. Louis, Mo.; H. L. Northrop, of Philadelphia, Pa., whose remarks were presented by title; H. F. Biggar, of Cleveland, O.; N. Waldo Emerson, of Boston, Mass.; J. G. Gilchrist, of Iowa City, Ia.; G. F. Shears, of Chicago, Ill.; Alonzo Boothby, of Boston, Mass.; Geo. W. Bowen, of Fort Wayne, Ind.; Emory B. Johns, of Lexington, Ky.; E. H. Pratt, of Chicago, Ill., and Dr. Packard, author of the paper.

Dr. Thomas L. MacDonald, of Washington, D. C., read a paper entitled "Surgical Shock." It was discussed by Drs. I. T. Talbot,

of Boston, Mass.; L. H. Willard, of Allegheny City, Pa.; A. Boothby, of Boston, Mass.; W. F. Knoll, of Chicago, Ill.; S. B. Parsons, of St. Louis, Mo., and by Dr. MacDonald, the author of the essay.

The Sectional Address, by Dr. W. B. Van Lennep, the Chairman of the Section, was then presented by title.

Next followed a contribution to "Thoracic Surgery," by Henry L. Obetz, M.D., of Detroit, Mich.

The meeting of the Section was then adjourned, subject to the call of the Secretary.

WEDNESDAY, MAY 31, 1893.

PURSUANT to adjournment and the call of the Sectional Secretary, a further meeting of the Section in Surgery was called to order by Dr. J. E. James, the acting Chairman, at 8.35 o'clock, P.M.

The first paper read was by Dr. H. F. Biggar, of Cleveland, O., entitled "Thoracotomy and Thoracoplasty."

Dr. W. F. Knoll, of Chicago, Ill., was called on to discuss the paper, but obtained permission, instead, to read a paper on "Vivisection and Pulmonary Surgery."

The whole subject of Thoracic Surgery was then discussed by Drs. C. E. Walton, of Cincinnati, O.; Sidney F. Wilcox, of New York, N. Y., whose remarks were presented in writing and without reading, and by Dr. H. F. Biggar, of Cleveland, O.

Dr. Geo. F. Shears, of Chicago, Ill., read an essay on "The Treatment of Epilepsy, Idiocy and Allied Disorders by Cranial Excision and Incision." Discussion on the paper followed, which was participated in by Drs. DeWitt G. Wilcox, of Buffalo, N. Y.; Clarence Bartlett, of Philadelphia, Pa., whose remarks were referred by title; W. F. Knoll, of Chicago, Ill., and by Dr. Shears, the essayist.

Dr. E. H. Pratt, of Chicago, Ill., read a paper entitled "A Report on Orificial Surgery, Including an Analysis of 1000 Cases." The essay was briefly discussed by Dr. W. E. Green, of Little Rock, Ark.

SECTIONAL ADDRESS IN SURGERY.

By W. B. Van Lennep, M.D., Philadelphia, Pa., Chairman of the Section.

The instructions of the executive committee were that the chairmen should give a review of the literature of their respective departments for the past *year or two.* Such a review of the surgical work, if any justice were done to the subject, would require more time than the utmost limits of courtesy could accord even a chairman. We were also instructed to give the utmost possible latitude to the discussion of the various papers, and, as far as possible, to have the latter of such a character as to invite comment. The essays were therefore to deal with live subjects, to be suggestive and not too exhaustive. To further this end a number of gentlemen have prepared themselves to discuss or, better, to enlarge the scope covered by the different essays. In this way practically two or three papers are assured on each subject, which is viewed from as many different standpoints. Surgery in general will be the theme of an address to the Congress by our eminent colleague, Dr. Helmuth, who will undoubtedly handle it as he only can. Again, the essays presented by the bureau cover a number of the most important divisions of the domain of surgery: Anæsthesia, Shock, The Brain, The Thorax, The Bladder. Each of them will necessarily review the literature more or less completely.

It has therefore been deemed advisable by your chairman, for the sake of brevity, and, particularly, with a view of eliciting discussion, to confine himself to one of the subjects that has not been touched upon by the members of the bureau, the Surgery of the Intestines.

The aids to intestinal suture inaugurated by the work of Senn have been extensively used and modified in this country. In England the decalcified bone plates were popularized mainly by Dr. Jousset, but, on the Continent and particularly in Germany, these

devices were looked upon with suspicion, and, after considerable discussion and experience, there seems to be a revulsion of feeling, until the ideal method is getting to be one that depends on the unaided suture. This is particularly true of lateral anastomosis which has come to stay apparently, the great drawback to plates and rings of any kind being the small communicating opening, which in time contracted to a dangerous extent. To avoid this a four-inch anastomotic opening seems indispensable, and the technique is as follows:

The intestinal surfaces are united by two parallel rows of continuous Lembert sutures, a quarter of an inch apart and an inch longer than the proposed opening. The ends of the threads are left attached to their needles. The bowel is open to the extent of four inches, a quarter-inch from the two rows of sutures. Bleeding points are clamped until caught up by a whip-stitch running around the opening and including all the intestinal coats. The two rows of continuous sutures first applied are then carried around this and the opening is complete (Abbè). Weir and Markoe report successful cases by this method.

To avoid the danger of infection from opening the intestinal canal, an anastomosis in two *tempos* has been proposed, the second, however, being carried out by nature. While intended particularly for gastro-enterostomy, the principle is applicable to any portion of the intestinal tract. The serous surfaces being united by a linear suture, an oval piece is cut out from each intestine a quarter of an inch from the suture, leaving the mucosa intact. The free edges of this opening are united on one side, and the bulging mucous membranes are drawn out, and a ligature tied tightly around them. The remaining free edges of the opening are then stitched, and the field of operation enclosed by a continuation of the first serous suture. By sloughing of the ligated mucous membrane the anastomosis is completed by the third or fourth day (Postnikow).

The importance of the firm fibrous submucosa as an anchoring ground for any suture is to be particularly borne in mind, and practice will teach the surgeon to recognize the resistance that shows it has been entered. While it is indispensable to the firmness of a suture that it should include a few fibres of this coat, great care should also be exercised not to perforate it and enter the intestinal lumen, as fatal leakage would result (Halstead).

Another valuable principle which has a great range of applica-

bility, *e.g.*, pyloric excisions, gastro-enterostomy, intussusception, end-to-end union, high rectal excisions, etc., consists of tacking together the lumina to be united by two stitches, one being applied at the mesenteric junction when that is to be included. An opening is made in the bowel a short distance from the ends to be united, which are then invaginated and drawn out of this opening by traction on the two sutures above mentioned. By passing a dozen or more interrupted stitches through the tube that is thus drawn out, picking them up in the middle and dividing and tying them, intestinal ends may be united at twice as many points. The sutured gut is then drawn back and the temporary opening closed. In this manner all the sutures are passed from the inside (Maunsell). A case of intussusception with carcinoma has been successfully treated by this method (Hartley).

A somewhat similar procedure has been practiced for irreducible intussusceptions. The intussusceptum and intussuscipiens are united at the point where the former enters the latter by a fine silk suture which includes the mesentery. The intussuscipiens is opened two inches below this point and the intussusceptum amputated. The stump is sewed with a whip-stitch arresting all bleeding, and the opening closed (Barker).

Another modification consists of amputation of the intussusceptum in the same manner, ligature *en masse* of the stump, and an anastomosis between the intestine above and the opening made to get at the intussusceptum (Bier).

The principle of the Heineke-Miculicz method of pyloroplasty has been extended to intestinal constrictions of a cicatricial nature in which resection is not deemed necessary (Péan, Hacker).

The danger of leakage after intestinal perforation or suture has been shown, experimentally, to be obviated by closing the opening or protecting the suture, by covering it with a neighboring loop of intestine or omentum. This has been found safer, and, of course, of wider applicability than the omental grafts so extensively used of late (Chaput).

The same writer closed openings made in the intestines of dogs with five or six thicknesses of iodoform gauze in the shape of pads, the edges of which were stitched around the orifice. The gauze acted temporarily, working its way gradually into the intestine, the opening being closed by adhesions to neighboring coils of intestine

or omentum. He also found that strips of iodoform gauze were an efficient protective to any intestinal suture.

It has also been shown experimentally that a part of the small intestine could be transplanted between two ends of the colon and replace the latter when extensive resections of it have been made (Mitcheli).

In resections for malignant disease, while one of the several cases may be cited in which the cæcum, ascending colon, and several inches of the ileum were successfully removed (Lowson), the tendency is toward an operation in several stages. 1. The growth is first isolated by resection, the two ends of its intestine being drawn out of the wound. 2. The continuity of the intestinal canal is established by anastomosis or end-to-end union. 3. The isolated growth is excised (Bloch, Hochenegg). This method can often be practiced when hitherto we only had physiological exclusion by anastomosis at our disposal; it is a curative instead of a mere palliative measure, when primary excision is unsafe.

Among the substitutes for the bone plates may be mentioned plates of raw potatoes (Dawbarn) and raw Swedish turnip (von Baraez). They have the advantage of being obtainable in emergencies and can be cut to any size desired, so as to insure a large opening. The sutures are fastened by being knotted and drawn through rubber tabs cut from drainage tubing, much as carpet tacks are armed or protected.

The stomach has received considerable attention. Gastrostomy appears to be particularly indicated in cicatricial narrowing of the œsophagus, when tubage fails, as it offers a curative inducement in the shape of retrograde dilatation. For malignant diseases it is dangerous and prolongs life but a short time (Senn). The rectus muscle and the eighth intercostal space are the points of election for the fistula. In the former location leakage is prevented by a sphincter-like action (Allingham). This may also be avoided by the use of two inflatable rubber bags, one inside and one outside, connected by a rubber tube. The operation is best done in two *tempos*. It is claimed that the movements of the stomach are seriously interfered with, and considerable stagnation occurs; also, in all probability, the peptic function is impaired if not destroyed, nutrition being carried on by the intestines (Ewald).

Gastro-enterostomy has been quite extensively practiced with

not altogether satisfactory results. It is after all but a palliative measure and owes its popularity largely to the dangers of pylorectomy. With a view of lessening these it has been combined with excision and closure of the opening in the stomach and duodenum.

Another palliative plan has been suggested, *i.e.*, jejunostomy. The jejunum a short distance below the duodenum is drawn out, divided, and the distal end sewed into the wound while the proximal end is implanted into the distal, a few inches from the fistula, to allow the pancreatic juice and bile to flow into the intestine (Maydl).

Digital divulsion (Loreta) has resulted fatally from rupture, although not carried to the extent recommended by its originator (Swain).

Pyloroplasty (Heineke-Miculicz) has been successfully practiced a number of times for cicatricial pyloric stenosis (Page, Kohler, etc).

A novel plan has been followed for the relief of dilatation of the stomach, *i e.*, folding or plating its walls inward by rows of sutures which do not include the mucous membrane (Weir).

It is a generally acknowledged fact that an operation for bowel obstruction is not complete until the intestinal paresis is relieved by puncture of the distended intestine. As a substitute for this, lavage of the stomach is proposed and has been successfully used (Lund). Post-operative obstructions have been in several instances successfully operated by section and separation of adhesions (Lucas-Championnèire). From the fact that these are soft and easily separated within the first few days, the attempt has been made to break them up by first washing out the stomach, and then pouring into the tube a half ounce of castor oil. Flatus and then copious stools were soon passed (Klotz). Both lavage and opium are looked upon as dangerous from their masking effect in intestinal obstruction, although the former is of value immediately before an operation to relieve reversed peristalsis and prevent actual "drowning" of the patient (C. M. Thomas). Early operations or exploratory section as soon as the diagnosis of obstruction is made, have been more than ever emphasized. The term "exploratory" is used because, the pathognomic symptom being fæcal vomiting, this should not be waited for, but the section made "on suspicion." Every condition, aside from fæcal impaction, which can produce the clinical picture, calls for a like treatment.

In cases where the cause of the obstruction is hard to find, a short

circuit by lateral anastomosis has given gratifying results (Atkinson). Unnecessary and often fatal delay and handling of the intestine is avoided in this manner.

Nelaton's enterostomy has also been resorted to in desperate cases. A rapid method of forming the artificial anus consists of attaching the intestine to the parietal peritonæum by 8 or 10 hæmostats, which are removed in 24 hours, when adhesions will have formed (Chaput).

In spite of the fact that the respective advocates of the clamp and cautery, and those of the ligature in the treatment of hæmorrhoids have partly ceased their invective against the more surgical methods of excision (Pratt and Whitehead), and directed their abuse to those who dare suggest any but the operation they have recently learned, colotomy, nevertheless the excisions of malignant rectal neoplasms have increased their hold on the profession. And justly, too, for every physician should strive after curative rather than palliative measures. The plan proposed by Kraske has, with certain modifications, been extensively and successfully practiced and advocated (McCosh). The results are as satisfactory as could be expected with cancerous disease. The sphere of the operation has been extended to attack the uterine adnexa (Montgomery) and the terminal portion of the ureter (Cabot).

In consequence of the incontinence frequently resulting, to allow of more extensive enucleation, and to insure an asepsis of the wound, the writer has successfully practiced the following method:

1. The formation of a permanent anus by inguinal colotomy, the intestine being drawn well down to leave an abundance of signoid flexure below.

2. Complete and thorough extirpation through the anus, through the sacrum, or by opening the peritonæum and drawing down the gut. Usually two or all three of these steps have been combined.

3. Closure of the resulting wound by granulation aided by suture.

In cases where the growth is not readily accessible from the abdomen or through the sacrum, Maunsell has made use of the principle already referred to: the abdomen is opened and the peritonæum around the bowel incised. The growth is then drawn out of the dilated anus by invaginating the gut. It is excised by amputating the intussusceptum, and the stump sutured in the manner already described. The intestine is drawn back into the abdomen, and

the peritoneal incision closed. The proposition is based on experiment.

Inguinal colotomy, or colostomy, or sigmoidostomy is the operation of election and has been very extensively used, the well-known methods of suspension with a rod or suture, together with previous drawing down of the intestine being followed. When no time is to be lost the gut has been simply suspended with a rod, the wound being stuffed with gauze (Maydl, Reeves, etc.). When immediate opening was necessary a tube has been introduced and the bowel tied around it (Jones), or the intestine has been punctured with a trocar and a rubber drain attached to the canula to carry off the discharges (Robson). In this way contamination is prevented until safe adhesions take place.

The subject of appendicitis has naturally received considerable attention; and, while but little that is new has been published, what is already known has been well emphasized, and, better still, the profession generally have been aroused to realize the importance of this affection. The impossibility of an idiopathic peritonitis, the frequency of appendical trouble, its fatality, and the importance of a study of each case from its incipiency by the surgeon as well as the physician are becoming pretty generally realized. It was a healthy sign of the times to the writer, when he offended the physician and disappointed the family by advising against an operation between attacks in a recent case. The advisability of such operations between attacks has been strongly emphasized, and the cases, which were but few and far between when the writer gave his experience on the subject at the last Congress, have been indefinitely multiplied and have shown most satisfactory results (Morris and others). The indications are: frequency of recurrence, increasing severity of attacks, and, particularly, continuance of pain and tumor between attacks. Persistent colicky pains, with tenderness in the region of the appendix, have been relieved by excision of the organ, which was found to be moderately diseased. Distinct attacks were absent (Hochstetter). The writer has opened three such cases and has been surprised at (1) the slight changes in the appendix; (2) the suffering resulting from such lesions, amounting at times to complete invalidism; (3) the complete and permanent relief following excision.

While almost every case of so-called typhlitis is dependent upon a diseased appendix, an occasional report is published of lesions in

the cæcum which produce much the same phenomena and results. In one instance a circumscribed fæcal abscess was found to be due to a perforating cæcal ulcer. The onset of the trouble was more insidious, diarrhœa having preceded it and being present; the initial vomiting was also absent; the appendix was normal (Hartley).

As to the pathology of appendical disease, catarrh, beginning at the cæcal junction, is still considered the usual cause. This is followed by the well-known changes: thickening, stricture, ulceration, perforation, or the formation of fæcal concretions (Kümmel). Foreign bodies are rare, although occasionally met with (Pinnock). Tubercular disease has also been known to be a not infrequent cause of this affection (Delorme), and actino-mycosis may affect this organ (Lang).

The importance of early operating has received due attention, some going so far as to recommend it as soon as a diagnosis is made (Hurd, Marshall). Persistence or aggravation of the symptoms after twenty-four hours, and, particularly, the characteristic signs of peritoneal infection, are the indications mainly relied on. An occasional cure, after general septic peritonitis has been lighted up, gives encouragement to try to save life even in this desperate condition. Cocaine as an anæsthetic (Tachard), and rectal puncture without anæsthesia, have been resorted to in very weak patients (Richardson).

That attacks that subside even should be watched with care and suspicion is shown by a case of the writer's. A young man got over a severe attack so completely that he was allowed to go about the house. A little exertion was followed by dangerous constitutional symptoms and the rapid development of a large tumor. A small well encysted abscess had ruptured, and the whole right side of the abdomen was filled with a stinking fluid, only feebly protected by adhesions. But for these adhesions he would have quickly died of fulminating septic peritonitis.

As to the technique, Iodoform gauze to protect the general abdominal cavity, together with a light pack of the same and a drain for the abscess, are universally used. The appendix, unless readily accessible, is usually left alone in these abscesses. Occasional cases of peritoneal infection have been met with in which the appendix was not perforated or gangrenous (Poucet).

The operations for the radical cure of hernia have been performed

frequently, and, on the whole, with improved results, but the tendency is a revolution from the enthusiasm that has led to indiscriminate operation and early reports of so-called cures by new methods. The ultimate results of a number of procedures have been reported, which, particularly, show the failures after the method that claims to substitute a cicatrix for a truss (McBurney), and which has been very extensively practiced (Bull).

The tendency now seems to be toward a restoration of the normal relations of the tissues as laid down in the method of Bassini. The principles of this procedure are, excision of the sac with obliteration of the peritoneal dimple, closure of the internal and external rings, and narrowing the canal, which has been split by a close approximation of the different layers of muscle and fascia. The narrowing of the external ring has been still further completed by chiselling a groove in the pubic bone, laying the cord in this, and covering it with the periosteum, which has been preserved (Frank).

The presence of the cord as an invitation to recurrence has been studied too. Its removal to prevent relapse once led to such a universal practice of castration as to call for special legislation. The sac being excised and sutured or tied, the ends of the ligature are passed through the muscles above the internal ring to draw up and smooth the peritonæum. In this connection it is worthy to note that Tait's proposition to reduce the hernia and close the sac and ring from the inside through an abdominal incision has been practiced occasionally. The cord is hooked up, while the muscles and fascia are closely united, obliterating the inguinal canal. By fastening it in the outer angle of the wound, its direction of exit is changed from that of the inguinal canal to directly forward or forward and outward. The cord is then laid outside the muscles, and the skin and fat closed over it (Halstead). By carrying an incision upward from the internal ring the direction of the cord may also be changed to an upward one, whence it comes down into the scrotum as above (Fowler). To lessen the size of the opening, all but one or two of the spermatic veins, which are apt to be enlarged, are excised (Halstead).

As aids to closure of the opening, decalcified bone has been used; also the outer pillar of the external ring has been detached, together with a bit of bone forming its insertion, and carried across to the

inner pillar and nailed to the symphysis. In this way the opening is reduced to a mere slit (Landerer). The sac has also been used as an external plug in contradistinction to Macewen's internal pad. After being isolated it is drawn out of an opening opposite or external to the inner ring, thus changing its direction. It is then twisted to obliterate the peritoneal dimple (after Ball), and fastened outside of the aponeurosis of the external oblique (Kocher).

Following the observation that the mesentery of the protruded gut is usually lengthened in hernia, and that the presence of this condition invites recurrence, it has been proposed that it be shortened by folding and suture (Shimwell).

To avoid infection of the wound, particularly in children, the urine has been diverted through a perineal wound (Gerster).

The treatment of femoral hernia, hitherto either entirely ignored, or relegated to a hurried postscript after an elaborate description of a new method for the cure of inguinal hernia, has received more attention.

The stump of the sac may be tacked well up inside the abdominal wall through which the suture ends are passed; or the isolated sac may be drawn through an opening above Poupart's ligament, twisted and incorporated in the lower wound, serving in this way as a plug to fill the femoral canal (Kocher). The need of such a plug or barrier has led to the turning up of a piece of the fascia of the pectineus muscle where it is thick and tough (Salzer), or the fascia and a flap of this muscle itself (Cheyne). In this manner the femoral canal is completely closed.

As the results of operations for the cure of inguinal hernia have been far superior to those for the femoral variety, an attempt has been made to transform the latter into the former. The tumor is incised and the sac freed, the inguinal canal is split and its posterior wall incised; the sac is drawn into this opening, tied off, and both wounds accurately sutured (Ruggi).

The indications for an attempt at radical cure are, 1, ineffectual, partially effectual, or painful trusses; 2, irreducible hernia; 3, occupation tending to force out the rupture; 4, proposed occupation which is precluded by hernia; 5, strangulated hernia where the local and general condition permit of such an undertaking (Bennett). Hernia in women, particularly when young, with the child-bearing age before them, seem to merit a trial of operation (Lucas-Championnière).

The treatment of gangrenous or suspicious bowel still calls forth a diversity of opinion. Relief of the constriction, warm applications, or temporary replacement with an anchor thread attached, should be tried in all uncertain cases. If a doubt still remains, the intestine is fastened outside the abdomen, dressed warmly and antiseptically, and observed. In a case in which this plan was followed, the gut was found normal on the fourth day and successfully replaced (Rovsing). In similar cases it is suggested that the gut be well drawn out, an anastomosis made above the suspicious area, and, after sloughing has taken place, the two openings be closed and the gut replaced (Helferich).

In general, however, primary resection is to be preferred to the formation of an artificial anus, and gives, on the whole, a lower mortality. It is, of course, understood that the patient's condition and the surroundings permit such a procedure, and that the surgeon has the requisite skill.

As to the method of uniting the two ends, the weight of opinion seems to be in favor of the end-to-end plan, with or without aids. These artificial aids may be in the shape of rubber rings or splints to hold the ends together; a rubber tube or decalcified bone drains to hold the intestine open and prevent invagination. When the two lumina are unequal, several plans may be followed: lateral anastomosis, lateral implantation (the small end into the side of the large tube), or slitting up the smaller tube on the surface opposite the mesentery until the openings are of equal size, when they are united.

The dangers of the persistent use of taxis have received well-merited attention (Bennett). Bruising or rupture of the bowel are often produced and much valuable time is lost. These two factors are largely responsible for the mortality of from 32 to 46 per cent. in the large English hospitals (Southam). The local application of ether, followed by gentle and intelligent taxis for not more than five minutes, and that only when a true hernial impulse is perceptible, will obviate the above-mentioned dangers. Immediate recourse to operation after the failure of such procedures cannot be too strongly emphasized. The persistent application of sulphuric ether to strangulated hernia has brought about reduction when taxis under an anæsthetic has failed (Finkelstein).

Although, as a rule, the presence of an undescended testicle in a hernial sac calls for castration, Depage reports a case in which it was

drawn down into the scrotum and the hernia treated in the ordinary way.

Cases of strangulation symptoms from the appendix, omentum and testicle are also reported.

Of the special varieties of hernia a number have been published:

1. Littre's hernia with no tumor, the partial nipping of the bowel in right femoral ring being found and reduced through a median abdominal incision (Keen).

2. An obturator hernia, strangulated and made out by a tumor, was successfully operated by Wyman. Anderson opened the abdomen for persistence of obstructive symptoms after an operation for femoral hernia, and found a knuckle of gut in the left obturator foramen. Examination by the rectum or vagina, as well as the diffuse deep swelling and pain, are the diagnostic points (Berger).

3. Ischiatic hernia has also been accidentally found:

(*a*). Through an abdominal section after persistence of symptoms in spite of a femoral herniotomy (Garvè).

(*b*). On removing a fibro-lipoma to which two hernial sacs were found attached (Schwab).

4. Hernia into the foramen of Winslow was made out but not reduced by abdominal section, recovery following a large enema (Neve).

5. Diaphragmatic hernia has been met with but only diagnosed after death.

6. The writer has operated two cases of hernia of the urinary bladder recently. Pain was a prominent symptom, but vesical symptoms were absent. No truss could be worn. In one the attenuated diverticulum was opened for the sac, the bladder drained, and the wound allowed to heal by granulation. In the other the viscus was recognized, and the abdominal wound was treated in the ordinary way. Both recovered and have not had relapses so far.

ETHER OR CHLOROFORM?

By Horace Packard, M.D., Boston, Mass.

Introduction.—It is the purpose of this paper to discuss some questions relative to ether and chloroform anæsthesia.

I need hardly refer to the fact that at the present time chloroform, or some modification of it, is the anæsthetic which is used for surgical purposes in nearly all European countries, and that it is also the favorite anæsthetic in the western portion of the United States. On the other hand sulphuric ether is used almost exclusively in New England and the Middle States.

It is my purpose to discuss:

First.—The reasons for this wide divergence of practice.

Second.—The reasons for the diverse opinions which are still held by the adherents to these two forms of anæsthetic preparations.

Third.—To place before you an improved method of Ether anæsthesia.

Sulphuric Ether.—Sulphuric ether was brought into use in 1846 and the first practical demonstration of it was made October 17th of that year at the Massachusetts General Hospital, in the city of Boston.

We need seek no further reason for an explanation of its prevalent use in New England and the Middle States. The natural pride and glory which a community shares in such a beneficient discovery is quite enough to give it an impetus, and result in almost universal adherence to it. The method of administration of Sulphuric ether for surgical purposes has remained substantially the same, during all these fifty years, as that utilized by Morton on that historic occasion in the Massachusetts General Hospital. To this day an ordinary cup sponge almost identical with the original, is utilized at that institution.

Two to four ounces of ether are poured at a time in it, or upon it, and an average total of from eight to sixteen ounces of ether is consumed at each seance. Every device and every form of inhaler

for ether administration has been some simple or complex modification of the original sponge, *i.e.*, the employment of a cap, hood, or cone to cover the nose and mouth, in which liquid ether is placed or poured, and over or through which the tidal air of respiration passes.

What are the objectionable features to surgical anæsthesia with sulphuric ether?

Individuals differ vastly in the way they succumb to ether anæsthesia by any method of administration, but the following is a summary of the disagreeable complications usually met:

First.—Immediate rebellion by the respiratory tract to the strong fumes of sulphuric ether, such as result from evaporation from a sponge or any of its modifications, with unbearable feelings of suffocation, and if the patient be a child, an ignorant person, or one devoid of great self-control, fright results, with effort to escape.

Second.—Ether vapor is an irritant to the respiratory mucous membrane, and in many cases causes a profuse secretion of mucus, with coughing, spasm of the glottis, cataleptic spasms of the respiratory muscles, with cessation of respiration and cyanosis. It is claimed that anæsthesia with ether is attended with greater danger in infants and the aged, on account of the greater fatality of bronchitis at those periods of life. This is based on the supposition that bronchitis is a frequent result of ether anæsthesia.

Third.—As a rule ether anæsthesia is followed by nausea, retching and vomiting, with headache and feeling of malaise for twenty-four to thirty-six hours.

Fourth.—It is claimed, but I am not sure that this claim is well substantiated, that sulphuric ether is a violent irritant to the kidneys. That kidneys which are already crippled in their functional activity, especially suffering from that form of disease characterized by albuminuria, may be still further crippled by the action of sulphuric ether to such a degree as to cause death.

Fifth.—Ether anæsthesia is said to induce mental aberration in those who have a special tendency to insanity, or who have already suffered from melancholia.

Sixth.—Sulphuric ether is a dangerous anæsthetic, though in skillful hands, deaths are very infrequent. I have during the past two or three years kept a careful record of reported deaths from ether which I herewith append.

A Death From Ether.—Death from the administration of sul-

phuric ether is of such rare occurrence that the case about to be narrated seems to merit a place on the records.*

The patient was a Frenchman, aged 46. For a year or more he had been suffering from tubercular disease of the tarsus of one foot. At the time of his admission to the French Hospital the disease had become widely diffused. The general appearance of the patient was bad. There were aortic and mitral systolic murmurs, and the heart-sounds were feeble. The urine contained a moderate amount of albumin. The patient's condition appeared not only to justify but to demand removal of the tubercular foot, and I prepared, therefore, on January 25, 1889, to do a Syme's amputation at the ankle-joint.

In the presence of the attending staff and internes, after the administration of half an ounce of whisky, the etherization was commenced. In a few minutes the respiration faltered and the patient became deeply cyanosed but this somewhat alarming condition quickly passed away. About five minutes later the assistant having the pulse under observation suddenly announced that it had ceased. Immediately hypodermatic injections of brandy, ether and sulphate of atropine were given; amyl-nitrite was applied to the nostrils, artificial respiration was practiced, and the head and shoulders were depressed by elevation of the foot of the table; but all was in vain; the patient was dead.

The ether used was the æther fortior manufactured by Squibb.

The following is the report of the autopsy made by Dr. G. G. Van Schaick, pathologist to the French Hospital, in the presence of the coroner:

"No rigor mortis. Body well nourished. Lungs, very small, otherwise normal; left pleura, a few adhesions, no fluid; right pleura, no fluid, many adhesions. Lungs slightly congested. Heart, hypertrophied; pericardium everywhere adherent; coronary arteries of small calibre; slight atheroma of the aorta; mitral valve stenotic. Spleen, enlarged. Kidneys, left atrophied, capsule adherent, markings indistinct, sclerosis above the pyramids; pelves filled with fat. Right kidney in about same condition; both surrounded by a thick layer of fat. Stomach, normal.

"The most striking revelation of the autopsy was the complete

* Paper by W. Duncan McKim, M.D., New York Clinical Society, March 26, 1889.

adhesion of the two surfaces of the pericardium. The death seemed due, then, to syncope, the heart being so fettered that it could not respond to the unusual strain thrown upon it. When beginning the inhalation of ether, the patient seemed very nervous, there was rather more struggling than usual, and a struggle closely preceded the disappearance of the pulse. The heart was in a condition to suffer permanent arrest of its function upon any slight increase of labor, and any occasion for unusual mental or physical excitement would, I think, have been as fatal as the ether. Had much more than ordinary care been exercised to quiet the patient's nervousness, and to restrain his jactitation by moral suasion and the gentle and gradual administration of the ether, I can readily believe that this feeble heart might have successfully emerged from its ordeal."

A Death from Ether.*—A death from ether is reported in a patient undergoing an operation for hæmorrhoids. The patient, a man of 65 years, healthy heart, always in good health except the hæmorrhoids, temperate in habits except being an inveterate smoker. The administration of ether was entrusted to a druggist who claimed to have had experience. In the midst of the operation the surgeon became conscious that something was wrong and found the patient pulseless. Artificial respiration, suspension, hypodermic injections of brandy, etc., were of no avail.

The Recent Death of Colonel Elliot Shepard.—This death from ether is so widely known and has gained such publicity through the public print, that I need but barely refer to it.

At the present writing I have seen no authentic report from the physicians in charge of the case.

Unfortunately no autopsy was made. It will always be regretted that such was denied, since knowledge of great value might have been attained thereby.

Until I know all the circumstances of the case, I shall be unable to divest my mind from the suspicion that there may have been incompetency in the administration of the anæsthetic.

Some years ago a British medical journal reported as the result of statistical research, one death to 23,203 ether inhalations.

Professor Guerlt of the German Surgical Congress reports one death in 8431 cases.

About three years ago the Director of Public Assistance of Paris

* *New England Medical Gazette*, April, 1892.

caused a report to be made on the surgical operations of the preceding ten years in the hospitals of that city.* As a result of this report ether was shown to have caused death once in 12,581 cases.

An editorial in the *Medical Record* of May 30, 1891, states that the prevailing belief is, that statistics will show about one death in 25,000 anæsthetizations for ether.

With this array of disagreeable and dangerous features of ether anæsthesia before us, let us turn to its

Virtues—*First.*—Its inhalation abolishes memory of painful sensations, in a very short space of time, two to three minutes.

Second.—Muscular relaxation usually follows in from five to seven minutes.

Third.—The cautious anæsthetist is always apprised of impending danger from impeded respiration, by coughing, labored action of the respiratory muscles, and the first sign of cyanosis, sufficiently early to so modify the ether administration as to stop the progress of such threatening symptoms.

Fourth.—The heart's action does not appear to suffer materially from ether anæsthesia. In threatening and fatal cases, it continues to pulsate for a time after all voluntary respiratory efforts have ceased. It would appear that labored action of the heart in ether-anæsthesia is a result of carbonic acid poisoning, rather than any inhibitory influence of the ether itself.

Fifth.—The exigencies of the practice of medicine and surgery frequently demand that the administration of an anæsthetic shall be conducted by a person possessing little or no practical knowledge of the matter, while the physician busies himself with the operation, with a more or less watchful eye over the progress of the anæsthesia. While we must deplore the necessity of entrusting a dangerous agent in the hands of an unskilled person, yet, if such must be done, all experience thus far points to sulphuric ether as possessing the least dangerous qualities of any anæsthetic now known.

Chloroform.—The value of chloroform as a surgical anæsthetic was placed before the profession by Sir James Y. Simpson, of Edinburgh, November 10, 1847, about one year after the advent of sulphuric ether.

Here, the glory of a new discovery, the discovery of an anæsthetic agent which appeared to possess all the desirable qualities of sul-

* *Medical Record*, April, 1890.

phuric ether, and, perhaps, lack many of its faults, was enough to cause its adoption throughout Great Britain and on the European continent, so that sulphuric ether fell into disuse; and, to the present day, chloroform, or some admixture of it with alcohol or ether, or both, is the anæsthetic most widely used in all European countries; and, I am prone to believe, in the western part of the United States.

The Dangers of Chloroform Anæsthesia—*First.*—Chloroform is a dangerous anæsthetic. It kills quickly; how quickly no one realizes unless he has administered it to an animal for lethal purposes. Two instances in my personal experience have served to impress me with the lightning-like rapidity that chloroform can get in its fatal work.

Case I.—In the early part of my career as a surgeon, a child was brought to my office by a physician for the reduction of a fracture. I administered an anæsthetic; and chose chloroform on account of its supposed quicker action. The child struggled, the physician held him, while I crowded the cone wet with chloroform close over the patient's face. After several deep inspirations, there was complete anæsthesia, but with it such syncope that, for several minutes, while I was instituting artificial respiration I was under stress of great anxiety lest his heart would never resume its action.

Case II.—I was conducting some experimental operations upon dogs. A female bull-terrier was being chloroformed. In the course of her struggles the cone was crowded close over her nose, and complete anæsthesia promptly followed, but she was *dead* beyond all efforts at resuscitation.

Once in the course of a laparotomy when a chloroform mixture was being used, the progress of the operation was interrupted by the sudden syncope of the patient. Respiration and pulse had ceased without warning.

Almost every accidental death during chloform anæsthetization shows that when danger comes, it comes without warning. During the past two or three years I have kept a careful record of reported deaths from chloroform, the most characteristic of which I here append.

Dr. Sherman's case.*—On July 2, 1889, a boy, aged five years, was chloroformed at the Children's Hospital for the little operation

* "Report of Two Cases of Death in Young Children During Administration of Chloroform."—*Medical Record*, March 15, 1890.

of *curetting some tuberculous sinuses.* The chloroform was given in the usual way, on a towel held a short distance from the face. Anæsthesia was easily produced, and the sinuses curetted. At the bottom of these was found a small patch of carious bone, and, as the child began to move, a little more chloroform was put on a towel, and the scoop applied to the bone. At this moment the child ceased to breathe, and the hæmorrhage from the wound also stopped. The chloroform was removed, the child inverted, artificial respiration done for a few moments, when the functions were restored. Color returned to the face, and the danger seemed past. It was only for a short time, however; after fifteen or twenty respirations, they again ceased, though no more chloroform was used. The heart stopped, the face blanched, the pupils dilated. Artificial respiration was again practiced, the child inverted; stimulants, such as whiskey, ammonia, Digitalis, and Nux vomica, were given by the hypodermic, hot and cold water alternately applied to the chest, and the battery was used—but nothing had the slightest effect, and after an hour's work the case was pronounced hopeless, and further efforts abandoned.

Dr. Gibney's case.—A female child, two years of age, with a sacral *spinal bifida*, was put under the influence of chloroform at my clinic on June 19, 1889. The patient was in excellent health, hearty and robust. The mother said it had never been sick. The chloroform was of good quality, and was administered in the usual way: that is, a small towel was saturated with the drug and held over the nose and mouth, but not in contact with the face. Within five minutes the child came under its influence, the pulse and respiration good. The hypodermic needle was thrust into the base of the tumor, and between six and seven drachms of serum mixed with a little blood were evacuated. The sac was injected with two drachms of what is known as Morton's fluid (iodine, ten grains; potassium iodidi, one-half drachm; glycerine, one ounce). The whole operation lasted about ten minutes, during which time the child was not profoundly anæsthetic, but cried out occasionally. The needle was withdrawn, and collodion on cotton placed over the opening, a flannel roller applied around the body preparatory to a more snug dressing. At this time, however, the lips became blanched, the pulse feeble, and three minims of Magendie's solution of morphia were injected hypodermically. The breathing at once became more regular, pulse a

little better. Very soon after this, almost immediately, the pulse grew feeble again, and forty minims of brandy were injected, when the patient ceased to breathe; and efforts at resuscitation, such as lifting the child by the feet, head down, artificial respiration, faradism, etc., proved of no avail.

Deaths under Chloroform.*—At an inquest recently held, the particulars were given of the death of a child, about six years of age, who succumbed to chloroform at the Victoria Hospital for Children. The child was admitted for treatment of disease affecting the left hip-joint. He had taken *chloroform successfully* upon two previous occasions, but on the day upon which the operation was to be performed, the boy died after having inhaled the anæsthetic for fifteen minutes. A post-mortem examination was held, and the medical officer is reported to have said that there was fatty degeneration of the heart, liver, spleen, and kidneys. The death recorded illustrates the fallacy of two popular beliefs: first, that a person that can take chloroform with impunity upon one occasion will subsequently enjoy an immunity from danger; and secondly, that children, who proverbially take chloroform so well, are less liable to fatal accidents from its effects than are adults.

In this same article, the last paragraph, we have the following:

Almost before the ink is dry with which we record the above fatality, the report arrives of the death of a woman in a Dublin hospital, to whom it was proposed to administer chloroform as a preliminary to *amputation of the thumb*. It appears that before she was fully anæsthetized she collapsed and died.

Death During Chloroform Administration.†—The late Dr. Parkes reported, in the *Journal of the American Medical Association* for February 14th, an unfortunate case, in which the patient, a healthy girl about eleven years old, died during an operation for removal of a *mole from the face* performed under chloroform anæsthesia. The operation was practically completed, and no chloroform had been given for at least five minutes, when she was seized with general convulsions. She ceased to breathe, and her heart ceased to beat.

Death from Chloroform.‡—The patient was a female, forty-one

* *London Lancet*, October 19, 1889.

† *N. Y. Medical Journal*, April 4, 1891.

‡ *British Medical Journal*, December 21, 1889.

years of age; the operation was *trachelorrhaphy*, and was duly completed. On removing the "face piece" retching occurred; more chloroform given. Suddenly, breathing ceased. The heart, examined before the operation, was declared healthy. No autopsy was made.

Accidental Death of a Physician from Chloroform.*—Dr. Justus E. Gregory, a well-known physician of Brooklyn, was killed on October 25th by an overdose of chloroform. He had been accustomed to inhale this anæsthetic for the relief of *facial neuralgia*. On the evening of his death he inhaled a dose of twenty drops on a handkerchief. He felt some relief, but called for another dose, and five minutes later was found dead. Dr. Gregory was forty-nine years of age. He had been a surgeon in the army during the war of the rebellion.

Three deaths from chloroform have recently occurred in London. One in a man, aged twenty-seven, about to be operated upon for *cellulitis of the leg;* another in a man, also young, with *varicocele;* and the third in a young girl with an *abscess of no great size,*—all three cases in which, without the chloroform, the young people would doubtless be alive to-day. It does take people a long time to learn that ether, dangerous as it may be, is a safer anæsthetic than chloroform.†

A death from the administration of chloroform is reported in the Cincinnati *Lancet-Clinic* by Dr. William L. Muzzey. The patient was an *apparently healthy man*, thirty years of age.‡

Another death from chloroform has been reported in London at the King's College Hospital. The operation to be performed was a trivial one for *suppurative cellulitis* of the leg. The patient, a male tramp, aged twenty-six, was recovering from a drinking bout, and had not partaken of food for three days. At the autopsy, fatty liver and fatty heart were discovered. Death was sudden and without warning.§

Death During Anæsthesia.||—An inquest on a case of death from chloroform at St. Mary's Hospital is reported this week.

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* *Medical Record*, November 1, 1890.
† *Medical Record*, January 16, 1892.
‡ *Medical Record*, October 26, 1889.
§ *Medical Record*, December 5, 1891.
|| *British Medical Journal*, December 20, 1890.

The operation was for the removal of a *crushed finger*. A mixture of ether and chloroform was administered. The patient gave suddenly, according to the report, two deep inspirations while under operation, when breathing ceased. The verdict recorded was death from syncope.

A statistical research by Dr. Lawrence Turnbull shows that since the work of the Hyderabad Commission, held in 1888, forty-three deaths have occurred in the course of anæsthesia; of these, *thirty-nine* were *from chloroform* and four from ether.*

I think no further quotations are necessary to substantiate the statement made earlier in this paper, viz., that chloroform is dangerous; that it kills quickly.

Second.—Beside this immediately fatal action of chloroform, recent pathological investigations seem to indicate that deaths not infrequently occur some hours, or even days, after chloroform anæsthesia.

Effects of Prolonged Chloroform Anæsthesia.†—Some observations, made about two years ago by Dr. Ungar, pointed to fatty degeneration of the heart and liver as the cause of death after repeated prolonged administration of chloroform. Further experiments on dogs have recently been made by Dr. Strassman, which appear to confirm this view. Dr. Strassman found that the first organ to be affected was the liver, then the heart, and after that other viscera. The nature of the morbid change was not a fatty degeneration, but fatty infiltration. The actual cause of death in fatal cases appeared to be the cardiac affection, as in all such a very marked degree of change was found in the heart. In non-fatal cases the morbid change was found to have disappeared in a few weeks' time. When morphine was given previous to the chloroform, less of the latter was required, and, consequently, the changes produced were not so considerable as when the ordinary amount was given. Animals suffering from hunger, loss of blood, etc., were especially predisposed to the morbid changes due to chloroform.

Death After Chloroform.†—Thiem and Fischer's *Ueber todliche*

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* "On Deaths from Chloroform and Ether since the Hyderabad Commission," by Lawrence Turnbull, M.D.

† *London Lancet*, 1889.

‡ *British Medical Journal*, September 13, 1890.

Nachwirkung des Chloroforms, published last year, tends to attribute otherwise unaccountable deaths following a few days after prolonged administration of chloroform, to fatty degeneration of the heart actually caused by the anæsthetic. A case is described where Thiem operated upon a robust and temperate man, aged 36, for fracture of the patella. The patient took just half an hour to get under, and the lengthening and suturing of the opposite fragments of the bone took seventy minutes; 150 grammes of chloroform were inhaled. The patient was slightly delirious for two nights, on the third day the wound looked well; the temperature was 100.5°, the pulse 96, and rather feeble. In the course of the evening the pulse grew much weaker, the delirium increased, and the patient died. At the necropsy the muscular walls of the heart were found in a state of *extreme acute fatty degeneration;* a similar change had attacked the *hepatic cells.* The patient was a miller's man, and had been accustomed to carry weights till the day on which he broke his patella; there was no previous evidence of any form of heart disease. Professors Thiem and Fischer observed similar changes in the heart and liver in animals kept under chloroform, especially when the dose was repeated for two or three days. It is to be hoped that surgeons will not be too ready to attribute their fatal cases to these distant effects of chloroform; but they will do well, in these days of long and severe operations on the abdominal viscera, to bear in mind that the prolonged administration of chloroform may be in itself a source of danger which is not passed when the patient is restored to consciousness.

Third.—Vomiting usually occurs after chloroform anæsthesia.

The Desirable Qualities of Chloroform. *First.*—Chloroform has a sweetish odor, not unpleasant to the respiratory tract, and can be inhaled without special feelings of discomfort, and rarely any interruption in breathing from spasm of the glottis or irritation of the respiratory mucous membrane.

Second.—It is rapid in its action, complete anæsthesia ensuing in from five to seven minutes.

Third.—But a small quantity is required to induce anæsthesia, two to three drachms, and an operation of an hour's duration may be conducted with less than an ounce.

Tabulation.

Ether.	*Chloroform.*
1. A dangerous anæsthetic.	1. A dangerous anæsthetic.
2. Ratio of deaths to inhalations: 1:23,204 (Andrews). 1:16,542 (Lyman). The ratio of deaths from ether is from $\frac{1}{4}$ to $\frac{1}{5}$ as great as from chloroform. Ether kills *rarely*.	2. Ratio of deaths to inhalations: 1:5860 (Lyman). 1:2500 to 3000 (Richardson). The ratio of deaths from chloroform is 4 to 5 times that from ether. Chloroform kills *frequently*.
3. Ether is rapid in its action, inducing anæsthesia in from 5 to 7 minutes.	3. Chloroform is rapid in its action, inducing anæsthesia in from 5 to 7 minutes.
Ether is an irritant to the respiratory mucous membrane, and in susceptible subjects may cause violent and fatal bronchitis.	Chloroform is a bland anæsthetic as far as its action on the respiratory mucous membrane is concerned.
Ether *stimulates* the heart's action.	Chloroform *depresses* the heart's action.
Ether is claimed to be an irritant to the renal tissue, and may produce fatal results if the kidneys are already crippled by disease.	Chloroform is said to have no perceptible influence upon the kidneys.
Ether may provoke attacks of melancholia in susceptible subjects.	Chloroform is said to be devoid of injurious influence on the mental faculties.
The administration of ether is likely to be followed by nausea and vomiting.	The administration of chloroform is likely to be followed by nausea and vomiting.

Conclusion.—It would appear from the foregoing, that certain facts regarding surgical anæsthesia have been established.

First.—There is some danger attending anæsthesia, whatever anæsthetic or method of administration be employed.

Second.—Sulphuric ether is the safest anæsthetic for general surgical use, in all periods of life, from infancy to old age.

Third.—Chloroform may be advantageously used in place of ether in cases of renal disease, characterized by albuminuria, and in persons having inherited or other tendency to melancholia.

Fourth.—In cases of weak heart, with dilatation from valvular disease, or other cause, any anæsthetic carries extreme danger with it. Valvular disease, with good compensation, does not contraindicate the use of ether.

Fifth.—If an anæsthetic must be administered to a patient suffering with bronchitis, in the absence of other contraindications, chloroform is preferable; but, in such cases, it is better to defer the administration, if possible, until the bronchitis has been cured.

In closing, I wish to refer to one other matter, and this I will introduce by quoting a paragraph from a paper by H. C. Wood, M.D., delivered before the International Medical Congress, in Berlin, August, 1890. Speaking of ether and chloroform, he says:

"The comparative advantages and disadvantages of the two anæsthetics, in practical medicine, are so well known that only one or two points seem to force themselves upon our present attention. I cannot see that the surgeon is justified in putting the life of the patient to the unnecessary risks of chloroformization, except under special circumstances. I believe, moreover, that much of the unpopularity of ether is due to its *improper administration.* It is so easy to embarrass the respiration seriously by the folded towel, as commonly used, that not only are the struggles of mechanical asphyxia almost invariably produced, but probably death itself is sometimes caused. Especially, is there danger of death being thus caused mechanically in the advanced stages of etherization, when the patient is too thoroughly etherized to struggle, and when the attention of the etherizer is, it may be, attracted by some novel and difficult operation. I, myself, confess to having once nearly killed a patient in this way."

It will be observed that I have underscored the portion of the above quotation referring to "improper administration."

This matter has so profoundly impressed itself upon me, that during the past few years I have devoted much time and thought to the devising of an improved system of ether administration.

This has resulted in the method which I have been pleased to term "Anæsthesia with Etherated Air," a full description of which was presented to the American Institute one year ago, and is now printed in its *Transactions* for 1892.

I would here emphasize what has been forced upon me from practical experience, viz., That surgical anæsthesia should be conducted by an expert.

It is an injustice to the patient, as well as to the operator himself, to entrust so important a matter as the administration of an anæsthetic to an inexperienced student, a nurse, or other incompetent person.

The expert in anæsthesia observes the first warning of danger, and trouble is thus avoided. The ignoramus sees nothing, because he knows nothing, and his first consciousness of impending danger

is likely to be after the patient has ceased breathing or the heart is pulseless.

Discussion.

Dr. Packard, of Boston: With the permission of the Congress I will simply give a *résumé* of my paper, hoping thereby for more time for simple experiments which I wish to show you, and the anæsthetization of a patient.

My paper is a defence of ether as a general surgical anæsthetic. At the outset, I will make the declaration, which I hope to prove to you ere I am through, that sulphuric ether is the best surgical anæsthetic which we possess, falling short of the ideal in but very few details. Ether's only rival in the field of surgical anæsthesia is chloroform. In spite of the virtues of ether, chloroform is still the anæsthetic in prevailing use over a large portion of the earth.

This seems a little strange, since the discovery of sulphuric ether as an anæsthetic antedates chloroform by about one year. It is still in prevalent use in New England and the Middle States, and the reason for this we find in the pride and glory of a community which attends the discovery of such a beneficent material. With the discovery of chloroform in New England, and the impetus which English, French, and German surgery have given to the world, and the adoption of chloroform and its subsequent use by those countries, explains why chloroform, or some mixture of it, is still so widely in use in Great Britain and on the Continent, and I think in the western part of the United States. My belief is, that the reason that chloroform has continued to be the prevalent anæsthetic, and that ether still is used by a comparatively small number, is because it has not received the scientific study which it deserves. To-day, forty-seven years after the discovery of sulphuric ether, it is utilized and applied in substantially the same way, and by the same method, that it was on that memorable occasion in the Massachusetts General Hospital in Boston—simply by saturating a sponge and placing it over the patient's face. To-day, that hospital has the very same kind of a sponge as was used forty-seven years ago, and all the forms of inhalers, which are modifications of the simple sponge or towel, embodies the same principle that was utilized in the use of the sponge. So I may say, that there has been, practically, no progress in the method of administration of sulphuric ether.

I will here skip over a large portion of my paper, which is devoted to somewhat dry facts regarding the comparison of the anæsthetical effects of ether and chloroform, and will briefly refer to a tabulation near the close of my paper, comparing these two rival anæsthetics.

Ether, a dangerous anæsthetic, not very dangerous, but once in a while we hear of a death. Chloroform, a dangerous anæsthetic,

much more dangerous than ether. The ratio of deaths by ether inhalation, by one author, is 1 to 23,204; by another author, 1 to 16,542. The ratio of deaths by inhalations of chloroform by one author, 1 to 5860; by another author, 1 to 2500. The ratio of deaths from ether is from one-quarter to one-fifth as great as chloroform. The ratio of deaths from chloroform is from four to five times that of ether. Ether kills rarely, chloroform kills frequently, and the deadly action of chloroform never can be realized until one has seen a death from it. Try to kill an animal with chloroform. I never was so impressed with the fatal action of chloroform as at one time when, in the course of some experimental operations, I was chloroforming a bull terrier. In the midst of the struggles I pressed the hole closely down over her nose, excluding the air. In a moment her struggles ceased. She was absolutely dead, beyond resuscitation, and that is just what we meet with every now and then in a human being—a death occurs like that.

Ether is rapid in its action, inducing anæsthesia in from five to seven minutes. Chloroform is rapid in its action, inducing anæsthesia in from five to seven minutes. Here they stand equal. Ether is an irritant to the respiratory mucous membrane, and in susceptible subjects may cause violent and fatal bronchitis. Chloroform is a bland anæsthetic as far as its action on the respiratory mucous membrane is concerned. Ether stimulates the heart's action and chloroform depresses it. Ether is claimed to be an irritant to the renal tissue, and may produce fatal results if the kidneys are already crippled by disease. Chloroform, it is said, has no perceptible influence on the kidneys. Chloroform is said to be devoid of injurious influence on the mental faculties. The administration of ether is likely to be followed by nausea and vomiting, the same as chloroform.

Conclusion.—It will appear from the foregoing that certain facts regarding surgical anæsthesia have been established. First. There is some danger attending anæsthesia whatever method be employed. Sulphuric ether is the safest anæsthetic for general surgical use in all periods of life from infancy to old age. Chloroform may be advantageously used in place of ether in case of renal disease, or other cases, characterized by albuminuria, or those having a tendency to melancholia. In cases of weak heart, with dilatation from valvular disease or other cause, any anæsthetic carries extreme danger with it. Valvular disease, with good compensation, does not contraindicate the use of ether.

I will briefly refer to the fact that for the past six years I have made a study of ether which has modified the notions originally prevailing and the method of administration. I would like, if I can have the time, to show you one or two little experiments, and then to etherize a patient. In the first place, I throw into an empty bottle

a few minims of sulphuric ether like that, putting the cork in, and in a moment it disappears. They say it evaporates. At any rate, there has been some union of the ether with the air contained in the bottle. I don't know just what that change is, whether it is a chemical or a mechanical change, but an explosive compound has been formed, as you will see in a moment. You observe that, with a slight explosive action, the cork flies out of the bottle. It simply shows that the combination of ether and air results in a compound which has a much greater volume than the air which has been saturated with the vapor.

I found by this experiment that the injection of more than one minim to the cubic inch of air overcharges that air. This bottle contains about fifteen ounces. The injection of fifteen minims of ether results in the observation at once of the disappearance of that liquid ether. If more than that be injected, there is a residue left, so that we have the fact established that a saturation of air with ether takes place at the rate of one minim to the cubic inch of air.

The next thing was to pass air through a column of ether like this (indicating). It makes its exit at this tube, and on experiment I found that the compound makes its exit just the same as it is formed in this body; that it is a compound consisting of one minim of liquid ether to one cubic inch of air. Now what is the property of that compound? Has it an anæsthetic property? The next thing was to accumulate that compound in a bag and apply it to the human respiratory tract and this was the result. It was so strong and powerful, so pungent, that the human respiratory tract would not tolerate it, although I had been told that previous experiments of this kind have been made, that the resulting compound from the mixture of ether with air would not produce anæsthesia.

The next step was to find out how much dilution with air it needed, to be tolerated by the human lungs, and if that would produce surgical anæsthesia; and it was learned that it would do so, more promptly than we ever conceived sulphuric ether could do. In from five to seven minutes complete surgical anæsthesia is induced by the resulting compound.

I will now anæsthetize a patient with this compound. I have an apparatus different from anything that has ever been used. It combines some principles which have existed heretofore. This bottle is just the same as the Junker method, which is used for chloroforming. This portion which goes over the face is similar to other inhalers with the exception of the compound. I call this "etherated air." The etherated air is pumped into this bag and the strength of that which reaches the patient's lungs is graduated by this valve which is opened or closed according to the circumstances of the case.

After all anæsthesia is but little more than an abolishment of

memory, the memory of painful sensations; and the moment that memory is abolished we may say that that patient is anæsthetized.

I will ask this patient to signal to you so that you may know the moment that memory is abolished. He will do it by making signals with this "snapper." After the abolishment of memory there is usually a moment or two which ensues before complete surgical anæsthesia follows. By surgical anæsthesia I mean a relaxation of the muscular system. If some one will kindly time the point at which memory fails from the time that I begin to see the ether pass through we will know the time that anæsthesia begins.

(After three minutes the patient produced before the Section failed to make use of the snapping instrument, which he had heretofore done in a rapid manner, and in seven minutes was apparently anæsthetized. He was restored to consciousness by the doctor in a little over one minute, and after acting in a bewildered manner and exhibiting some nervousness, was removed from the room).

S. B. Parsons, M.D.: *Mr. Chairman, Ladies and Gentlemen:* When I was asked to open the discussion on anæsthesia, I felt that perhaps I was incompetent to do so. There were many who were better able than myself to discuss this question, for I consider it one of the most important of the questions that can come before a medical association. I do not believe, Mr. Chairman, that in the list of surgical subjects that will come before this body to-day, there will be one of so great importance as that of anæsthesia. We have just had a beautiful illustration of how easily some persons can be put under an anæsthetic. But let me tell you one thing that you cannot always get males and females under an anæsthetic as easily as this one was put under. It is very pleasant when you can, but the majority of them will require from four to a dozen men to keep them quiet during the process, whether it be ether or chloroform. The very fact of the patient lying on the table and quietly submitting to an anæsthetic, inhaling it regularly without fear, without nervous excitement, is one very great advantage, I can assure you. But when you go into an operating room, whether it be an old person or young person it makes no difference, and find their hearts going like a trip-hammer, their minds and bodies in a state of agitation, afraid of their lives, not knowing what is going to be done to them—afraid they will die—I tell you you have got a subject entirely different from the one we have just witnessed. You will find that you have got something to do before you give the anæsthetic, and it is a very important point, I assure you, to determine how to overcome that, and to quiet that nervous excitement. The very first thing an operator should do in going into an operating room is to allay the fears and quiet the nervous excitement of the patient. Before an anæsthetic is given, before an inhalation is taken, the nervous excitement should be overcome and the fears quieted and pacified.

The paper that Dr. Packard, of Boston, has presented, I had the pleasure of looking over, and he has given us the relative statistics of the frequency of deaths under chloroform and ether, and he tells us it is from five to ten times greater under chloroform than ether. Now then, if that is a fact, chloroform has a ten-fold power greater than ether in paralyzing the nervous system, for etherization is simply paralysis. *First*, It is, what? A stage of excitement. *Second*, Loss of consciousness. *Third*, Loss of volnntary movement, and *Fourth*, Loss of reflex action. Your patient is not in a fit condition for you to go on with a capital operation until these all occur. It is all right if you want to open a felon or perform some minor operation, but I assure you that the patient never will snbmit, without a good deal of struggling, to an operation of amputation. This case before us was not a full and complete anæsthesia in my belief.

Ether is the safest; there is no question about it. Ether is the safest, but the doctor has told you that you cannot use it always. There are times and conditions when you cannot use ether. Now, ether is not a good thing in the obstetric room, for one thing. Chloroform takes preference there. Then again, there are organic changes he told us; trouble with the respiratory tract, organic changes in the heart, and in the renal structure, and in the brain. Now we cannot use ether with a degree of safety, or any anæsthetic, under these conditions. It is true, I will admit, any anæsthetic is an unsafe anæsthetic. Ether cannot be used at these times, but you can use chloroform where you cannot use ether.

Now, ether paralyzes one set of nerves, you may say, and chloroform another. The symptoms of ether narcosis, profound narcosis, or the incidents which accompany or attend ether narcosis, almost always—nine-ty-nine times out of a hundred—will give you warning before the dangerous period has arrived; and those symptoms are what? Interference with and obstruction of respiration. With chloroform it is the opposite. It does not give you any warning; it takes the patient off as quick as a flash. On the one hand it is failure of respiration, as they call it, causing death under ether, and on the other, it is a failure of heart action under chloroform. Those are the two conditions, and those are the two symptoms.

There are many little things that tend to make anæsthesia very unpleasant. To give an anæsthetic where there is a very irritable mucous tract, or where you are going to operate upon the mouth, or larynx or pharynx, ether is not a good anæsthetic to use. Chloroform is by far the best. If you use ether, you will have the throat filled up with mucus in a very little while. It seems to paralyze, I might say, the vaso-motor nerves, and we have an unusual amount of mucous flow which fills up the throat and obstructs your view, and you are obliged to keep wiping it out, and the operation is delayed while your patient is not benefited. Oftentimes you cannot get along and you have to give it up. With chloroform it is differ-

ent; you don't have that abundant flow. There are other things that conduce to make anæsthesia pleasant or unpleasant. Temperament sometimes has something to do with it; and peculiarities of constitution, where they are known to exist, should always be done away with before the operation. Sex also has something to do with it. Women take an anæsthetic a great deal better than men. They are more reconciled to the condition, more reconciled to the circumstances; they have less fear and nervous excitement. They lie down and take it quietly, and they come out from under it a great deal better.

With males we have a greater number of deaths than with females. It is not all because the operations are so much more frequently had on males than on females, but it is on account of the sexual conditions, I believe. Now as to the question of chloroform being used in preference to ether in different parts of the country, perhaps climatic changes and conditions may have something to do with it. We have found one thing, that ether does not produce that profound relaxation that we sometimes need.

(At this point, Dr. Northrup's discussion of the paper was presented by the chairman. This part of the discussion has not been received by the editor.)

H. F. Biggar, M.D.: *Mr. Chairman, Ladies and Gentlemen:* I have listened to this paper, and have seen the clinic and also listened to the discussion with a great deal of edification. It has been a question with me for years just the proper thing to use—chloroform, ether, or the A. C. E. mixture. For years I used the A. C. E. mixture. I never have had so good results since, but I was compelled to give it up because if an accident should occur the coroner was after us, and we had no person in this country to assist in getting us out of the dilemma. The popular idea was then, ether. I gave ether a trial for one year, determined to find out its merits or demerits. With the most perfect instruments and most perfect appliances, I had six patients to go right down almost to death before they were saved. I read up chloroform, and I am a friend of chloroform. When you can perform difficult operations with two grammes of chloroform, I am a friend of chloroform.

There is a great deal in statistics, but I take exception to the statement that more die from chloroform than ether. I dispute it, and challenge it, and I tell you why. When they die from chloroform they die on the table. When they die from ether they die afterwards in the room where they are taken from the table. It may be two days before they recover from it. I really think there are more dying from ether than from chloroform, for the very reason I gave you. One point more, and that is this: we ought to be care-

ful and study our cases. We cannot make a rule for every case as a law unto itself, and I use ether and I use chloroform, and wish the law would protect us in the use of the A. C. E. mixture, which in my estimation has been the safest and quickest, and by all means gives the best satisfaction ; but there is this difficulty about it: when you prepare it, prepare it fresh. Dr. Tait uses it, and he asks nothing better than that mixture. I know there is a diversity of opinion about it, but as long as I am practicing I shall use my own judgment as to what I give, whether it shall be ether or chloroform. I dare not give the A. C. E. mixture in this country, because I wouldn't get any support if the patient should die. I have been a victim of this. I have been accused of losing two patients, one was by chloroform, which was never inhaled, and the other was by chloroform which she did inhale. I would not let the patient get up and sit up after an anæsthetic so soon as this one did. I would be afraid of paralysis. Keep your patient quiet, get him in good condition, and if there is any likelihood of vomiting, get a large dose of some cathartic down him as soon as possible. You want it to work down, and as soon as you get it down you will have no vomiting.

Question by Physician in audience: Where do you get your theory of vomiting?

Dr. Biggar: I am indebted to Dr. Thayer. He says he has no trouble about vomiting. He gives them a good dose of citrate of magnesia. I don't want to exceed my time; but one moment, if you will allow me. The reason I lost a patient from chloroform was this, and it was a lesson to me, and will be a lesson to you, perhaps: after the operation had been completed, the patient commenced vomiting, and the vomiting was so severe that she had stasis in different parts of the brain from undue pressure caused by the vomiting. That was why she lost her life. I think we ought to carefully study that point and prevent vomiting, and by all means get a movement of the bowels if possible before the person really comes out of the anæsthesia.

They want to know what the A. C. E. mixture is? It is one part alcohol, one part chloroform, and one part ether.

Dr. Emerson: I am here to say a word for Dr. Packard's apparatus. I am very familiar with the working of it, and could say some things he wouldn't feel like saying. I will say that the patient he has had to-day is the worst one I have ever seen him experiment with. It took seven and a half minutes to etherize the patient. As to Dr. Packard allowing his patient to sit up so soon, I would also say it is entirely safe for him to do so, for the reason the patient had taken so small a quantity of the ether. His patient was entirely etherized. One could have performed amputation or any other operation. I simply take this opportunity to speak in behalf of Dr. Packard.

Dr. Gilchrist, of Iowa City: I have one word to say on the subject of anæsthetics. We have been using the A. C. E. mixture entirely for a number of years, and find it a very satisfactory agent. There is one point we haven't brought out in the testimonials. Isn't it possible that ether and chloroform and all anæsthetic agents are to be looked upon as remedies? Is any anæsthetic agency universally to be approved? There are many cases, I think, where we dare not use ether. There are many cases, I think, where we would hardly dare to use chloroform. It certainly appears to me that there will be a time when we will come to understand anæsthetics perfectly. With reference to the rapidity with which anæsthesia can be produced, we have been keeping some records, and we find that the average from the A. C. E. mixture is about eight and three-quarter minutes for complete anæsthesia.

I want to give another remedy to add to the one that Dr. Biggar gave, and one I think of even greater value, and that is Bismuth, given in the third and higher attenuations. I have had one or two cases where Bismuth has acted wonderfully. One case occurred but two or three weeks ago, of abdominal complication. I want to call attention to that as one of the remedies we have not given special attention to in abdominal complications. I have used it in the third attenuation.

Dr. Shears: I want to take exception to the statement that ether is the best general anæsthetic. I don't think it is an anæsthetic that should be most generally used. It should be confined to a very limited number of cases. It is not applicable where there is any disease of the rectum, or taken in an operation on the larynx, the mouth or the nose. It is very difficult to use ether with any degree of satisfaction. It is not applicable to the treatment of urethral inflammation, or inflammation of the kidneys, or stone in the bladder. In all those cases I think ether is not a safe anæsthetic. It is not a good anæsthetic in operations on the brain; it induces greater congestion, and is more difficult to control. I find, in a large number of instances of operations upon the brain and head that ether is not of service, and is not useful as an anæsthetic in operations on the abdomen. It is the cause of very frequent vomiting. It is very difficult to control the patient for a long period of time. I believe it is the more dangerous anæsthetic in the long run. Pneumonia follows in two or three days, or what is supposed to be pneumonia, or some other trouble, will show its effects from ether. I say this, because there is a general feeling among experts that if the patient dies after chloroform, the physician has not used the safest anæsthetic. I think we should be assertive of the idea that we are using safe anæsthetics. I believe much danger from chloroform arises from its improper administration. It has been shown that danger arises from interrupting respiration. The physician pays all his at-

tention to the pulse, and if he would pay his attention to respiration and see that the patient does not take in too large an amount of the anæsthetic, then I believe there would be fewer cases of death from chloroform. Chloroform has been put over the face in the same careless way that ether is applied. I believe it is a rare case in which you find the heart cease to beat before the patient ceases to breathe. If we paid more attention to respiration there would be fewer cases of death from chloroform.

Dr. Boothby: I wish to say a word in favor of ether. I am induced to do this because of the remark of the gentleman who has just spoken. The inference would be that we have many deaths after our operations—some time afterwards. That was intimated by Dr. Biggar's remark; but if you will consider that matter more carefully and consider the results of those who use ether you will find it is entirely erroneous; that it is an assumption; that they haven't the slightest evidence to base it upon. It is a positive fact that ether can be used in almost every kind of operation. I know from my own experience and from the experience of my Brother Packard and many others. I always use ether myself, and I believe the remarks here have been intended to discredit ether. The apparatus that has been shown has given very satisfactory results with the use of ether in small quantities in a large number of cases that it has been used in. There has never been an accident that could possibly be referred to ether, either at the time of the administration of it or later.

Dr. Bowen, of Indiana: I kept one patient under the influence of chloroform continuously for two nights and a day. I was called to treat a gentleman who hadn't swallowed a particle of food for three days and nights. He had terrible pains, and his brother came and placed himself under bond that if I killed him he would guarantee me against damage, and told me to give him chloroform. I gave him two pounds of chloroform and kept him under the influence of chloroform two nights and a day. His respiration was five or six in a minute and his pulse kept up. When I let him out from under the chloroform the neuralgia had given way. That was the longest time I had ever kept a patient under the influence of chloroform. Since the grippe had made its advent in the country I found it very imprudent to give chloroform in all cases.

Dr. Johns, of Lexington, Ky.: On the question of vomiting after anæsthesia there was suggested here the third of Bismuth as a remedy for it. I want to say I would rather use the one hundred thousandth of Ipecac. I would put it in a little pellet, and put that into about three gallons of water, and pour it down the patient rapidly in full quantities, and start him to vomiting, and he will get up a heat. I would put another in about as much water, and I would cleanse the bowels from below. Now, whether the medicine

or water would do it is a question. I am not a Hydropath, but a Homœopath. I have never had any trouble along these lines. I want to state that all the benefits of this cure we have found out by Homœopathy.

E. H. Pratt, M.D.: There are several reasons why I do not wish to speak. One is I do not want to break the rules governing the time that is allowed. In the next place, if I was to speak upon this subject, I would want fifty minutes instead of five. As it is, I will put in the five minutes as best I can. In the first place, let me say that I had nothing to do with the construction of the human body. I never made any suggestions as to the way it was to be built. I never had anything to do with the telephonic wires that ramify through it. I had nothing to do with its mechanism. I had nothing to do with the causes that make the milk come in the woman's breast at just the right time for the baby. I had nothing to do with these things, and I am not to be held responsible for them. I wish to escape punishment, you see. I will make this suggestion, however, that when a person struggles in anæsthesia he needs rectal dilatation. Rectal dilatation would shorten the time of that anæsthesia by fifty per cent.

With reference to the forms of the anæsthetics employed, I agree with the popular idea that ether is dangerous, and I think that chloroform is dangerous. I use a mixture of the two, and have no respect for the heart, lungs, kidneys or anything else, simply because I know this fact, and know it beyond any question, so far as my judgment goes, that what is needed is rectal dilatation and flushing of the capillaries. By rectal dilatation and flushing of the capillaries we will remove the congestion from the kidneys and relieve the pressure upon the heart which chloroform will cause. I don't know why the medical profession ignores the fact that rectal dilatation is the greatest resuscitator from narcosis. I do not understand why they don't wish to investigate. A gentleman from the opposite school came to me from Mississippi. He had made some observations and some study of this question. He came here to learn a little more, and wished to compare what he saw and knew with other physicians. He visited one of the clinics of this city, and it ought to be published throughout the length and breadth of this land that any human being would allow a patient to die for the reputation of "legitimate" measures, rather than to save him by what they didn't know anything about. They ought to be placarded as unfit for the practice of medicine. They were operating for laceration of the perinæum. The patient didn't respire for five minutes, and was apparently a corpse. He stood there and saw the operation, and he had seen cases of Bright's disease and dropsy; and, forgetful of the stigma that would be placed upon him if he failed, he sprang into the arena, into that tremendous stillness, and said, "This is a case

for rectal dilatation." The operator stood dumbfounded, and said, "We have no speculum." He says, "Have you any objection to my dilating the rectum?" They said, "We have not any speculum." He put his finger into the anus. This happened to be a good case, and soon he had the satisfaction of hearing the welcome sound; the groan of the patient greeted his ear, and she was revived, and they went on and finished the operation, and the reputation of the school was saved. What was the result? The next day they published upon the blackboard a notice that "Hereafter all who wished to obtain tickets to the clinics must obtain the tickets below." In fact, they weren't grateful that the patient was saved. They would rather she would have died under the legitimate idea than be saved by rectal dilatation.

Dr. Packard: I will take a few moments to close the discussion. I wish to correct a few erroneous ideas, and, first, that there is great danger after the anæsthesia from ether. It is just the opposite with chloroform. Death occurs in twelve, eighteen or twenty hours, because of the result of fatty degeneration. That is one of the dangers of chloroform. It is a danger that follows very frequently. We grant that there is sometimes pneumonia and violent bronchitis, but it is extremely rare. I would like to speak of the deaths from ether in comparison with chloroform. I make the statement that in the Massachusetts general hospital since its organization, twenty-three years ago, nothing but sulphuric ether has been used, and there never has been a death attributed in any shape or manner to ether. I cannot wonder that the West likes chloroform. Chloroform has always had the reputation of being so fast.

Abroad, human life is not held for as much. If the patient dies in a case of anæsthesia, it don't amount to so much. Chloroform will be relegated to a few cases which present some form of nephritis and those other rare cases that will succumb completely to muscular relaxation. In the 250 cases that I have tried with that instrument there have been but two in which I have not secured complete anæsthesia. Cases of execution and capital punishment are the cases for chloroform. It will kill a good deal more quickly and a good deal more humanely than the gallows or electricity.

SURGICAL SHOCK.

By T. L. Macdonald, M.D., Washington, D. C.

Thanks to anæsthesia and antisepsis, pain and poison have been eliminated from operative surgery, and the most formidable complication now remaining for the surgeon to cope with, is shock. Its paramount importance, and the meagreness of the subject, make its further study eminently advisable. As here considered, the subject has nothing to do with "railroad spine" or "litigation symptoms," but is to deal with the immediate constitutional phenomena produced by local traumatism, and will be used synonymously with collapse. It will not be understood by this that shock cannot be produced by psychic as well as traumatic influences. The interdependence of the mind and body is shown by the influence of impressions that fall upon the retina from without. Let a patient who is to be operated gaze upon an elaborate array of instruments, and in some cases the effect is most pronounced. Through the mind the knees quake with terror, the hair stands on end, the brain reels, the heart beats tumultuously, the respiratory apparatus stammers and gasps, the perspiration oozes from every pore, the urine is voided or suppressed—in fact any of these organs may be transiently disturbed or even paralyzed. These are familiar illustrations, but serve to show that psychical disturbances may act powerfully upon our physical being; and who can tell (and I ask it in all charity and kindness) how much this had to do with the death of Col. Shepard?

The above examples would seem to indicate that, turn and twist it how we will, we cannot escape from the fact that the mind is a power within our muscular being (Mueller), or that the psychical and physical are practically one, and that the normal status of our grosser structures is more or less dependent upon the mind as well as the heart or lungs. Although shock of this variety may be profound, it is not necessarily surgical, but the varieties which are the accompaniment of visible trauma, and especially if coincident or

subsequent to surgical operation, are of special interest to us. Because the symptoms of shock are so familiar, they may wisely be omitted; but, on the other hand, its pathology is so obscure that it demands further study. The most advanced work on surgery takes up surgical shock, and dismisses the subject of its pathology with the statement that it consists of paralysis of the vaso-motor system. Other works, devoting several pages to the pathology, add nothing to the above except what is conjectural. We know that peripherally the capillary resistance is diminished: so, too, is the motive power of the cardiac centres. If the vaso-motor supply be cut off from one part of the body, the vessels therein dilate, but in a few days recover their tone, although future contraction and expansion are dependent upon local stimuli. The abdominal vessels may or may not be dilated. Further than this, everything at present lies beyond the range of human perception. We may say that in shock there is a disturbance of the molecular equilibrium, which can no longer liberate force, but this is of little satisfaction to the analytical mind. Autopsies teach us nothing of the pathology, no post-mortem traces ever having been discovered. The whispering of molecular vibrations, which constitute human agony, is lost in the roar of hurrying dissolution.

The clinical phenomena, however, corroborate the vaso-motor theory, and the consequent relaxed vascular system. It is borne out especially by the intense thirst and the incredible quantities of water that many of these patients drink during profound collapse.

Case I.—Removal of four and one-half inches of rectum for epithelioma. The operation was tedious but not very bloody, only two vessels being ligated. The operation was completed, and the patient, in the most profound collapse, was placed in bed. The pulse was but an occasional flicker, the respiration faint; features pinched and ghastly, pupils dilated. The ears and supra-sternal fossa were filled with cold sweat, and the body and limbs wet and cold. Hypodermic stimulation brought about little or no improvement, and as there was fortunately no vomiting, I decided to try stimulating fluids by the stomach. Brandy and hot water was administered, at first a few drops at a time, but it was soon given freely, when it was perceived that deglutition was unimpaired. Suffice it to say that during that night he drank nearly five quarts

of the liquid, though much of the time too weak to do more than turn his eyes appealingly toward the glass. He rallied the next day, the temperature not running above normal. In such cases the desideratum seems to be to give the relaxed vascular system something to contract upon.

The proneness of intestinal lesions to produce shock is worthy of attention, and so is the deception in its manifestations, especially during the period preceding dissolution. It is characterized by cessation of pain and sometimes vomiting, both of which may have been persistent, and the patient becomes perfectly easy and rational and the temperature may be normal. This is augural of collapse, which is precipitated by operation.

CASE II.—I was called hurriedly to the suburbs, and went prepared to operate for suspected intestinal obstruction. Found the patient able to sit up, feeling perfectly comfortable and having a normal temperature. The history as well as condition upon examination corroborated the tentative diagnosis, and after giving the family a most guarded prognosis the patient was hastily prepared for operation. The abdomen was quickly opened and a quantity of dark brownish fluid came to view, and instantly the patient was collapsed. The pulse was lost and the respiration consisted of an occasional gurgling in the throat. Inversion and subcutaneous stimulation were quickly resorted to. A hasty examination of the abdomen revealed a twist in the small intestines lying in the left hypochondrium. Below this the gut was collapsed; above it, markedly distended and five or six feet of it black and gangrenous. Holding the intestines in with hot sponges, we placed her in a warm bed and surrounded her with artificial heat and continued the stimulation, the abdominal wall being sutured in the meantime. She rallied slowly, only to die seven hours later, and another death was registered, hastened by operation, and yet preventable by earlier interference. Here life is unstable, and the slightest molestation is sufficient to destroy the equilibrium, but humanity prompts us to attempt to aid while yet the fingers of our surgical instincts are palpating the lean possibilities that lie beneath the abdominal wall.

Before going further, I wish to wring the neck of a moss-grown delusion. There has been much teaching to the effect that surgical shock is in proportion to the extent of the injury received. This is

not true; the extent of the injury is no standard by which to estimate the intensity of the shock. It has been said that "shock is the measure of the ability of an individual to resist hurtful influences from without." In a general way this is good, but it is far more likely that it is *a measure of the power of resistance possessed by certain organs or structures.*

CASE III. will illustrate my meaning. A female about forty, with a hydatid cyst of the liver as large as a cocoanut. Being incapacitated for household duties, she desired an operation. The abdomen was opened freely, but the cyst was non-removable (*en mass*) because firmly adherent in all directions save toward the line of incision. The intestines were pushed aside and a passage to the tumor maintained by a firm packing of Iodoform gauze. In spite of the rather free handling of the abdominal contents (because of a desire to extirpate if possible), there was little or no shock following the operation. During the next few days her general condition improved, and when sufficient time had elapsed to allow the bowels to be walled off firmly the cyst was opened, and this simple procedure was followed by the most pronounced disturbance of all the vital functions. The pulse was a mere thread, and running one hundred and seventy-six to the minute, and vomiting was quite troublesome. It was evident that her life was greatly imperilled, and I was quite doubtful as to the issue. A pint of hot black coffee in the rectum and hypodermic injections of twenty minims of Digitalis tincture brought the pulse down in two hours to one hundred and twenty to the minute. She was then complaining of the strong taste of the coffee, and was tided over the danger of the hour.

CASE IV. is even more suggestive. Mrs. G., æt. 51, suffering from a large ovarian cyst. The abdomen was opened and the tumor, weighing fifty-five pounds, removed. There was no post-operative shock, and she laughed and joked with the return of consciousness. A few days later an enema of warm water was given by a competent nurse, and was promptly followed by profound shock. It was a very good picture of Travers's "prostration with excitement." She tossed wildly, the respirations were quick and shallow, pulse lost in one wrist and flickering in the other, skin clammy and cold. She complained of nothing definite, but the face was expressive of indescribable anguish. Arsenicum 3x was administered, and, aided by sharp stimulation, she made a good recovery.

There was a suspicious flabbiness about this patient that I did not like, and on this account the operative work was conducted with all possible dispatch in order to avert shock. The significant fact, however, is that she could withstand a laparotomy but not a rectal injection.

The examples showing that the extent of the injury is not in proportion to the shock might easily be multiplied. Opening a digital abscess has produced death; a slight blow upon the testicle or epigastrium will result in alarming depression of all the vital forces. I have seen simple skin plantation for an ulcer of the leg followed by severe shock, from which the patient did not recover for forty-eight hours.

In one particular, shock has not been sufficiently dwelt upon, either by writers, teachers, or operators, and that is, that sudden cessation of life in an individual does not, of necessity, mean cessation of cellular life in the tissues. This is a legitimate conclusion, and is based upon investigations in physiological chemistry, corroborated by observations in natural history and by the experiences of surgical clinicians. We may say that, grossly, the animal life is extinct, but histologically there is yet life and function in the tissues. This is shown by the fact that muscle removed from an animal killed suddenly will for some time give off carbon dioxide, absorb oxygen, and respond to electric stimuli. Even after rigor mortis has occurred, tremblings, elongations, and contractions have been observed. After cross section of a tadpole the tail will not only live for some time, but will actually grow if allowed to remain in the water (Vulpian). For more than twenty-four hours after removal from the animal the pancreas continues its fermentation, and the liver also produces sugar slowly after death. Surgeons know that ends of fingers severed and left upon the block have been sent for and made to live and grow upon their stumps, and that skin from recent corpses has been successfully grafted upon the living.

Now, if the cellular structures of the grosser muscles and glands thus continue their function, so must the histological elements of the heart muscle, or the respiratory apparatus or nervous system.

How often have we seen, upon the operating table, extinction of life which would be eternal were the surgeon to turn his back to the patient, and how often the operation resolves itself into a question, not of obtaining primary union, removing the tumor, or preventing a hernia, but of saving a human life.

The ghastly but tranquil features bedewed with tomby mist, the motionless thorax, the pulseless wrist—all these shape themselves into a picture with which almost every surgeon is familiar. In this case life is extinct, and from death to dust the pathway is straight, and all that lies between the patient and the grave is a death certificate.

The following I take from our hospital records:

CASE V.—Patient 60 years of age and quite feeble. Heart, lungs and kidneys sound. Small, hard tumor in Douglas's cul de sac, which causes much suffering. Prognosis very grave. Treatment: rapid abdominal section. The growth, an ovarian carcinoma, lifted, and a ligature passed through the broad ligament, when it was announced that both respiration and circulation had stopped. The heart was still, and not the faintest sign of respiratory effort could be detected. The patient was inverted and artificial respiration resorted to, and was accompanied by hypodermic stimulation. For some time all effort seemed in vain, but slowly and faintly the pulse reappeared, and in about ten minutes she began to breathe and life was resumed. Actual time of operation a little over fifteen minutes.

There is no more tragic scene in human life than sudden collapse on the operating table. To know that one's hand has shortened the life of a patient, even though doomed by some pre-existing disease, is a horribly unwelcome sensation, but to know that resuscitation is possible, even when life seems extinct, robs operative surgery of much of its horror.

While we regret exceedingly that with our present knowledge we are unable to give the rationale of the phenomena of surgical shock, the great and absorbing question should be its prophylaxis, and I believe there is no other means by which so much can be accomplished in this direction as by rapid operating. Remember, that upon the operating table it is often impossible to differentiate traumatic shock from the toxic effects of our anæsthetics; that this period is usually characterized by subnormal temperature; that beyond a certain point every inhalation of the anæsthetic increases the depression; that, at best, operative insensibility means the establishment of a tendency toward death, and that the culmination of this tendency may occur during one single minute which is unnecessarily added to the time of operation. This thought should underlie all our surgical procedures, but I am afraid we may justly be charged with more or less disregard of this principle. There is not enough

attention devoted to the pre-operative arrangements, and consequently too much dilly-dallying during the operation. How often have I seen an hour and more consumed in a simple trachelorraphy which could easily be accomplished in twenty minutes, or even twelve or fifteen minutes, with competent assistants. This must not be regarded as a reproach to beginners, but to those who have been operating long enough to possess much better technique. I would not be understood as desiring to sacrifice methods (good methods) for rapidity, but that I plead for better methods in order that the operative period may be reduced and with it the tendency to shock.

The preparation of the patient for a state of invalidism, too, is all important, and this having been done it should be a part of our professional ritual to operate in the morning whenever possible. I am well aware that there are lesions that can neither wait for preparatory treatment nor the morning hours, but the fact that this is just the class most prone to shock but shows the importance of the above observations—when they can be carried out.

Tranquilizing the patient's mind, the administration of medicine before operation and the maintenance of proper temperature during the operation are too familiar to bear comment.

Nineteen years ago it was taught that inflammation and suppuration were reduced to the minimum, and that they were the inevitable accompaniments of operative surgery. Let us hope that our present ideas may be as abruptly changed, and that shock may yet be dispelled from the list of surgical complications. At present, however, it must be admitted that shock cannot be positively averted and that the best the surgeon can do is to equip himself for the comprehensive grasp of critical emergencies.

Collapse on the table has been sufficiently dwelt upon already. I might add that in two cases I fancied I obtained relief by Maass' method of rapid and rhythmic compression of cardiac region, but I cannot speak with any degree of positiveness of this method. In one case I obtained an abrupt renewal of respiration by anal dilatation. It has failed me in many others. In post-operative shock we can find a place for our Homœopathic remedies, and while I never omit the general measures deemed necessary or at least essential, I have acquired an immense amount of faith in Camphora (low, of course). I would give more for this drug than for all the rest of our Materia Medica. Arsenic is good, and so is Veratrum alb.,

but often the vitality is so low that the stomach is inactive and we can obtain no results by this route.

In such cases a favorite resort with me is enemata of warm and strong black coffee; from a half pint to a quart, and repeated as fast as it is absorbed or till reaction is secured. Dr. Van Lennep has obtained good results from enemata of whiskey and Valerianate of ammonia—a teaspoonful of each.

After all, our main reliance is upon cardiac and respiratory stimulants, artificial respiration and artificial heat. Copious intra-venous or intra-cellular saline injections will always be remembered, especially if there has been much hæmorrhage.

The most manifest indications point, with imperative necessity, to tiding the patient over the perilous but brief period and our success in obviating the tendency to death will be in proportion to our ability to distinguish the direction from which death is threatening.

Discussion.

I. T. Talbot, M.D.: The subject of shock is one of great interest to every surgeon. First, because it may render a simple operation fatal, or in grave operations, suddenly turn the surgeon's victory into defeat; and second, because he can never know beforehand the liability of the patient to shock, or the extent to which it may attain.

This paper of Dr. Macdonald's suggests certain points of great importance to the surgeon, and among these the surgical character of the affection. We all appreciate the great difference in which different persons are affected by syncope or fainting. Some may withstand the most violent injuries and yet retain their consciousness, while others faint on slight exhibitions of pain, or the sight of blood, or even the thought of injuries; and the effect upon the circulation, even to the almost complete cessation of the pulse; the pallor; the cold, clammy sweat; and the entire unconsciousness, are familiar to us all. The symptoms, except in degree, are quite similar to those of shock, and it is difficult to determine beforehand the patient most liable to be affected by it. As a rule we expect it more in those of a highly nervous, active, or sanguine temperament, while those of a plethoric or sluggish condition are more exempt. Yet even this does not always hold true.

Under my care a strong, highly plethoric man, who felt most fully able to go through the operation without ether, yet finally thought it best to take it for opening a palmar abscess, took the ether very favorably with little or no struggling, and after the operation had been performed, and he had partially rallied from the ether, sud-

denly went into collapse from which it was quite difficult to resuscitate him.

On the other hand, we have all met most nervous and excitable men and women who have gone through the severest and most long continued operation without any symptoms of shock or collapse. That the mind may affect the patient unfavorably I believe to be quite certain, and in looking over my notes I find several cases in which the patient had previously exhibited great dread of an operation feeling quite certain that she would not recover, in which although in no case fatal collapse occurred, yet it required during the operation and afterwards, careful watchfulness to relieve the first apparent symptoms.

In cases, then, of persons subject to easy syncope, I think it of great importance from the first to see that as far as possible their systems are in good condition physically, that they should have previously quiet rest, good food, and cheerful surroundings; that however much their friends, or the family may be informed of the possible dangers, the patient should only look to the most hopeful and encouraging prospects.

I fully approve of the use of Camphor as a stimulant, as suggested by Dr. McDonald, yet the most rapid and successful measure I have ever adopted has been the hypodermic injection of the finest quality of brandy. The motion of the patient, friction, and encouraging words on the first appearance of consciousness, will do much to speedily restore the patient.

L. H. Willard, M.D.: We have all listened to Dr. Macdonald's paper on "Surgical Shock" with interest and attention both because the subject is of great importance and because of its able presentation. The subject is of especial interest as the opinions of surgeons differ widely not only as to treatment but as to the proper time to operate after an accident involving serious shock. I wish to discuss briefly this latter phase of the subject. Before doing so, however, let me present in a few words our method of treating shock at the Pittsburgh Homœopathic Hospital, a method which is not new in any essential particular, but which has rendered excellent results.

Our hospital, being in the vicinity of many mills and manufactories, and having a railroad patronage, we are familiar with all varieties of shock from the slightest nervous depression or exaltation to the most profound collapse. A case of serious injury being received is at once taken to the operating-room, if the injury requires operative treatment, and the surgeons of the staff being sent for, vigorous restorative measures are begun and kept up continuously.

These consist of, briefly:

1. Control of hæmorrhage, by tourniquet or ligature.
2. Heat—hot water bags, etc.
3. Stimulation—by means of brandy, Digitalis, or the alkaloid by

hypodermic injection, Sparteine, Strychnine, Atropine. But especially have we found efficacious a mixture of brandy, ether and spirits of Camphor, equal parts, which administered by hypodermic injection, seems to have a salutary effect on the circulation in the state of collapse incidental to profound shock.

If there has been loss of blood we use hot water by mouth or rectum, and other ordinary means, such as bandaging the limbs, depressing the head and shoulders, etc.—Rectal injections of warm water seem to have been especially beneficial in many cases even where there was no appreciable loss of blood, having apparently a stimulating effect on the circulation and promoting the freer action of the kidneys which are especially prone to be affected.

The addition of a little salt facilitates absorption by raising the specific gravity more nearly to that of the blood. Our custom is to inject 4–8 ounces every 1–3 hours depending upon the necessities of the case. If the sphincters are lax a smaller quantity is used. Many cases of serious and seemingly fatal shock have been saved, I believe, by this means more than by any other. As instances in point I might cite two or three recent cases of crushed limbs requiring double amputation, one case of leg and thigh amputation having been brought ten miles to the hospital on the guard of an engine after a delay of two or three hours from the time of the accident. In this instance amputation was performed at once and restorative measures were kept up for many hours after. The state of a patient's vitality is indicated, of course, by the condition of the pulse and respiration, and by the temperature. Operative measures, if not of immediate necessity, are delayed only long enough for the pulse, respiration and temperature to indicate a beginning reaction—not until full reaction has taken place. And it is in this particular that I wish to hazard an opinion at variance with the generally accepted belief.

When I have a patient suffering from shock caused by an accident, the first thing necessary, it seems to me, is to relieve the depression, sustain his strength, and perform any operation that may be necessary *as soon as possible* and as quickly as can be done. This we know is the generally accepted belief of a great many surgeons, who give as reasons for such procedure that an operation, when the vitality is so low, would surely be fatal. No one who has waited patiently for his patient to recover fully from shock can help but feel that this waiting should be avoided. It is certain that the older surgeons, in times before anæsthesia was known, were right in laying down these rules in regard to shock, for in those times and under such conditions it would have been fatal to operate when the vitality of their patients was so low, thus intensifying the shock. But now, when we have anæsthetics to deaden the pain and even to improve the heart action (as it seems to do at times), and Camphor and other

remedies to assist in stimulating the circulation, I cannot think it necessary to wait until full reaction has taken place before operating.

By so doing we nearly always produce a second shock, which may throw the patient into a condition beyond any help we may be able to render. In a given accident—a patient with crushed arms or legs, for example—tourniquets are applied to the part to prevent hæmorrhage; and they not only control the hæmorrhage, but they also cut off the entire circulation of the part. The nerves are pressed upon, and, in fact, the limb below the tourniquet is for the time being practically dead, and remains so until after the operation. Now it seems to me that the mere fact of an amputation when the patient is in a condition of shock, can do little harm to a part virtually dead. Mangled tissues are generally cut off and splintered bones removed. It is but little more to take away the entire crushed mass, sawing off the bone, and completing the necessary dressings, thus ending at once the pain and irritation caused by a mangled limb.

We are now speaking of crushed limbs and of operations done in the quickest possible manner, care being taken, of course, to insure complete antisepsis, and the pulse and respiration being sustained by all necessary means. There are at times cases requiring long and tedious operative interference where it would be advisable to wait until the patient's condition shall better enable him to withstand such a trial of his vitality.

Many cases, such as abdominal injuries, with protrusion or laceration of any of the viscera, require immediate surgical attention. Such cases do not seem to be markedly affected either by the use of an anæsthetic or by the operation itself, so that even in cases not requiring immediate attention it is my custom to operate at once if the pulse shows any sign of returning vitality, rather than submit the patient to the risk of a second shock.

And in this line let me say that I believe the anæsthetic, especially chloroform, to have rather a stimulating than a depressing effect on the circulation in such instances.

THE CHAIRMAN: The subject is now open for general discussion.

DR. BOOTHBY: *Mr. President*, it seems to me that it has not been made clear to us just what is considered surgical shock. We must distinguish between surgical shock and the shock from an injury, as has been spoken about in the last one of these discussions. In regard to surgical shocks proper, we have to distinguish between a true shock and the case that Dr. Talbot referred to. My opinion is that a surgical shock is a very rare occurrence. In the first place, I believe that a great cause of surgical shock is having the room too full, or the patient entirely denuded over a large portion of the body, and that the chill that comes from that is the cause of a great deal

of the shock. I speak from my own experience and from the experience of my brothers, Packard and Emerson. We have almost never had a case of true surgical shock. We have done our operating in a very warm room, with a temperature as high as 85°. I have almost had it 90°, and while it is uncomfortable to the operator, and very uncomfortable to those looking on, it is decidedly beneficial for the patient. In the case of No. 1 in the original paper, while it is distinctly said that there was comparatively little hæmorrhage, I believe that the collapse was due to the hæmorrhage. I don't see how an operation can be made without considerable hæmorrhage if the patient is susceptible to fainting. In Cases 2 and 3 I have no doubt the septic condition of the system, and the changes the operator made in the anæsthetic, caused the trouble. I want to say one word in regard to the suggestion in the paper that the operation should be made as rapidly as possible. Perhaps I wouldn't agree with Dr. Packard, for he operates very rapidly. I do not and cannot. I take a great deal of time for my operations. I believe if you are careful with your anæsthetics, and don't give too much, and keep your patient just over the line and no further, you will have no trouble to keep him under the influence of ether. In regard to the administration of coffee, I hope you won't use it. I have no argument in its favor, and I wouldn't use it.

W. F. Knoll, M.D.: This subject of shock after operation or injury is a very important one to any surgeon who has done work a great while in public hospitals or railways. When such a complication arises in the course of an operation, it always goes far in the mind of our surgeons, and they have tried to find out its causes and what shock is. And after careful investigation of the subject, and from pathological observation, I have concluded that a shock is a sudden suspension of nerve forces. Now, shock is produced in one patient very easily and in another not so easily. I have seen it caused from dilatation of the rectum. I have seen shock from pulling a tooth. I have seen shock from a man simply washing out his ear. I have seen a patient upon whom I have amputated three limbs of the body, not affected a particle by shock. I have seen a patient at the age of 90 upon whom I have made an operation where there was scarcely any variation in the pulse. You never can say when a patient is going to have shock; it depends altogether upon the nervous organization of the patient, and taking that as a basis, what *is* the term "shock?" Take your patient as you find him. What do you see? You find a slow or a rapid pulse. You see that respiration is superficial. You have general relaxation and sometimes a discharge of urine. There is complete relaxation, the nervous system has been so profoundly affected that you have momentary paralysis. What you want to get at is to preserve the temperature of the body. Heat is an important thing; it is one of the

main things. And in the second place, you want to give a medicine which in a certain measure will restore the operation of the brain and the nerve centres, and the best thing is Strychnine. We have received from the hospitals some profound results from hypodermic injections of $\frac{1}{120}$ grain of Strychnine. I believe in something that will have a stimulating effect also upon the circulation and upon the brain, and for that I believe Camphor is the best remedy. I believe it is a very good thing to place the head below the rest of the body. I believe hypodermic injections of some stimulant, especially brandy, and the flushing of the bowels with warm water with whiskey in it, is a very good thing. If you can find out the peculiarities of the patient, you can very often prevent shock. If you have a patient that is of a very highly nervous organization, by preparing the mind you can stop a great many complications that may follow operation. Now, the treatment that we have used with so much success can be summed up in this way: First, prepare your patients for the operation mentally and every other way; assure them they are going through their operation nicely; don't have a great struggle with them under anæsthetics. In the second place, if shock takes place, keep up the temperature of the body at once. In the third place, use some hypodermic injection like Strychnine; in the next place, give something that will stimulate the heart's action.

S. B. Parsons, M.D.: Perhaps I am laboring under a wrong impression but it strikes me that Dr. Macdonald's paper referred to shocks from accidents, more particularly than shocks from operative measures; therefore shocks from operative measures are not to be discussed at this time. There is one point that has absolutely been overlooked in the paper and discussion—one that has not been touched upon, yet one that has a more direct effect upon the patient than all the other matters that have been spoken of, and that is reflex action. We all know that sudden excitement of the sensory nerves will disturb the heart's action and may arrest its movement. If the patient is undergoing the operation and has only been partially anæsthetized when the operation began, or when he is partially under it and it has been continued for some little time, then the sensory nerves will reflex painfully and affect the heart's action, and its inhibitory movement. That is why we see sudden collapse during operations. There is another reason and that is the vitality of the patient. The energy is so far below par that they are not able to stand both the shock and the anæsthetic without great stimulation. The heart is the thing to be looked after, not the warmth of the body; it is the heart. You have your collapse coming on suddenly; it is the action of the reflex movement upon the heart. That is all I have to say.

The Chairman: If there is none other Dr. Macdonald will have an opportunity of saying anything he may desire in closing the discussion.

DR. MACDONALD. *Mr. Chairman, Members of the Congress:* I will keep you just a moment. Something was said about Camphor. I don't want to be misunderstood as to the use of Camphor or any other internal remedy, or as excluding stimulation. I believe hypodermic stimulation of importance. Something has been said with reference to chloroform as a heart stimulant in cases of shock. My experience has been very different; where I have used chloroform and the heart has become dangerously depressed I immediately use ether as a heart stimulant. I think that ether is a better heart stimulant than chloroform. I say I had some cases that collapsed. I want to say that all these cases were anæsthetized. You have been warned against the use of coffee. I admit in Boston there is a well-known way of using coffee, which is much better than putting it into the rectum. My experience is, as far as æsthetic matters go, it is better not to give it in that way. This is a matter of human life, and I don't think of small matters like that. I am looking after the patient and human life. One of the cases I reported was said to have been influenced by septicæmia. It was charged by Dr. Boothby with having caused the collapse; that it was probably due to septicæmia, and that it was a dangerous operation. Let me say that it was a case of either performing the operation or losing the patient. So I felt that the operation was justifiable. But I don't want to be knocked down by the chairman, because he has an old grudge against me, and I will stop now.

DR. BIGGAR: What objection is there to preparing the patient and anticipating the shock by giving a small quantity of whiskey or a hypodermic injection in proper quantities in the proper time?

DR. MACDONALD: I don't know of any objection to it. In my paper I spoke of the use of medication before operation. It seemed to me so common and so ordinary that it didn't require any comment at all. I use coffee, strychnine and brandy; in many cases I deem it advisable to use stimulants of alcoholic nature.

DR. NIELSON, of Michigan: What shall we do with that large and growing class of people who object to alcoholic stimulants in any shape or form.

DR. MACDONALD: From my acquaintance with the members of this Congress I think we should have to go outside of it to find them.

A CONTRIBUTION TO THORACIC SURGERY.

By Henry L. Obetz, M.D., Detroit, Mich.

In the wonderful progress of modern surgery, every anatomical field has been worked over until at this time there remains but one where the principles are undeveloped and where experimental research and increased clinical experience must develop new paths before we can relieve humanity of many ills, cured in other parts of the human body by local operations, and which, reasoning from analogy, should be cured by like means in this.

The field is that of "Thoracic Surgery."

Every accessible point of the cranium has been invaded, the outer bony covering ignored, and found not to be in the way of reaching deeper parts; exploration of the brain finds it tolerant, abscesses can be aspirated or incised and drained; new formations, not only on its surface but in its substance, can be safely removed; convolutions of the brain found diseased or abnormally irritated have been boldly excised, and the patients not only live but return to the walks of life restored to health and usefulness.

It was found that certain diseases of the kidney were amenable to operative influence, but this did not cure certain other supposedly incurable conditions which, after great suffering on the part of the patient, always ended in death. The new fact that a kidney could be removed and the other could and would do its work, broadened the regional operative field until now tuberculosis of the kidney can be cured with relative certainty by its excision.

A single ovarian cyst successfully removed by abdominal section demonstrated the feasibility of attacking an intra-peritoneal disease. From this small beginning has grown up the great field of abdominal surgery. The death-rate was high at first, but as compared with the death-rate of the diseases sought to be cured meant the saving of thousands of lives which would have been lost or doomed to hopeless invalidism. First one, then both ovaries, then the uterus and ova-

ries were removed, and the operations perfected and classed among remedies for the relief of disease.

Next, the liver, stomach, spleen and intestines came in for their share of attention, until now, given a condition affecting any abdominal viscus and we have the remedy at hand, in a carefully planned operation, depending on experimental research and clinical experience of the broadest and most elaborate kind. I might go on into other fields, all of which have been as carefully worked and the results recorded for the benefit of the profession present and future.

Regional surgery, then, is in its infancy when applied to the thorax, but I feel confident that the day is not far distant when we shall see many supposedly incurable affections of the thoracic viscera cured by practical operations, based on sound principles, to be established in the near future.

The need for pushing operative work to a greater degree of perfection here is very great, and thousands of lives, now lost, may, with a material advance, be saved. Experience in general teaches us that tuberculosis is for the most part a local disease in its first stages, and can be eradicated by radical local treatment. If by any possible means we ever arrive at a point where the ravages of this disease can be stayed by surgical means when it attacks the lungs, the saving of human life resulting will be greater than from any other single operation known to surgery.

Many other conditions here demand mechanical interference, and the principles governing some of the operations, and the operative technique, is more or less definitely established at this time; but no operation here has the same wealth of experimental observation and clinical experience based on it as in the examples cited in other regions amenable to surgical treatment.

The reasons for the hesitancy and delay in attempting surgical interference in this region are partly anatomical and partly clinical.

The structural difficulties are to be found in the conformation and make-up of the chest. In the inverted cone containing the vital organs, we have the flexible yet practically immovable spinal column as a centre, flanked on either side by the ribs and their attached muscles; the ribs are elastic and movable in some respects, firm and resistant in others; so imbedded in the thin muscles attached to them as to be a part of a general whole, leaving the chest cavity but thinly covered when removed. If the ribs are not removed they

prevent collapse of the chest-wall and the physiological rest so essential to the healing of any area after operation.

Clinical reasons are found in the insidious onset of many chest affections, the extreme difficulty of locating and determining the first stages of the formation of abscess, and of determining the exact location and extent of the diseased area.

Patients having pulmonary tuberculosis are, as a class, most hopeful, and underestimate the dangers confronting them; they have no fear of death as a rule, though threatened with impending dissolution, and insist that they are better, and have great hope of cure as soon as this or that refractory organ, usually the stomach or liver, shall have been toned up and made to do its duty.

Operations on the chest are the most formidable ones the surgeon is called on to do. The stoutest-hearted observer of such an operation is appalled at the struggles of the patient for breath, at the convulsive cough caused by the reflex irritation resulting from the injury inflicted on the structures of the chest-wall, or lung.

Blood is blown through the opening into the pleural cavity by the convulsive efforts of the patient, and the operator and assistants are covered with its crimson spray. Syncope may threaten and the deathly pallor but too plainly indicate the presence of the grim destroyer. Again, fluids are drawn or forced into the trachea and the livid, bloated countenance and cessation of pulse and respiration show that death is threatened from asphyxia. In no other class of cases have surgeons been called on to record so many sudden and unaccountable deaths, from slight operations.

No wonder that patients shrink from such measures even when life is in danger and the procedure is a necessity, nor is it a wonder that the medical adviser hesitates, and is loth to urge operative measures in chest affections, as long as delay seems possible. It is this very delay, the putting off until the very last chance of the patient is gone, which gives the high death-rate to the operation of *dernier ressort* in this region.

Experience and experimental observation teach that aside from the effects on the lung caused by free air pressure, the size of a wound in the chest makes no difference. Thus after a small opening in the chest-wall the lung may not collapse; if the opening in the chest-wall is larger than the opening in the trachea of the patient the lung does collapse.

It is also a fact borne out experimentally and by the history of accidental injuries of the chest, that both pleural cavities may be opened at the same time without ending in the death of the person so injured. We have numerous examples of this in the history of gunshot-wounds, both in civil and military practice.

A case of this kind came under my observation in which a pistol-bullet of large size entered the chest under one armpit and came out at the same point on the opposite side, completely traversing both pleural cavities and by some means missing the great vessels of the chest. The patient had abundant evidence of injury to the lungs followed by some traumatic pneumonia but after a time recovered and since has been perfectly well.

South, in his notes in Chelius's *Surgery* relates the case of a man pinioned by the shaft of a chaise, which was thrust entirely through both pleural cavities and after a severe illness he recovered and lived ten years.

He further quotes a conclusive case of a gun-shot injury from Home, who relates the case of a man shot through both lungs, who recovered and lived thirty-two years. After death, post-mortem examination verified the fact of the wound of both lungs by the bullet.

In part first of the *Surgical History of the Late War*, we have a number of such cases reported but it is unnecessary to repeat them here. I only wish to give evidence of the single fact that both pleural cavities can be opened at the same time, and both lungs wounded as well, and yet the patient recover.

Parts of the lungs have been removed after injury of the chest-wall leaving a hernial protrusion of the lung.

I refer to these cases, that we may study the methods by which this was done and the results which followed.

In his chapter on wounds of the lungs, I find the following cases cited by Cooper. See *Dictionary*, p. 485. He says, the protrusion of a portion of the lungs, in consequence of wounds penetrating the chest, is a very unusual case; but there are some instances recorded by writers. Schenekius relates an example taken from Rolandus. He was called to a man who had been wounded in the thorax six days before. A portion of the lung protruded in a state of mortification. Rolandus extirpated it, and the patient soon recovered.

Tulpius has recorded a similar fact. A man received an exten-

sive wound just below his left nipple. His naturally gay disposition led him to neglect the injury; and on the third day a piece of the lungs three inches in length protruded. The patient went to Amsterdam which was two days' journey, for the purpose of receiving aid in one of the hospitals of that city. The protruded piece of lung which was already mortifying, was tied and cut off with scissors. It weighed three ounces. The wound healed in a fortnight, and the patient experienced no complaint afterwards, except a slight cough, with which he was occasionally troubled.

He survived the accident six years, leading a wandering drunken life. After death nothing particular was observed in the thorax, except that the lungs had become adherent to the pleura, in the situation of the wound.

Hildanus related another case; a man was wounded with a knife between the fifth and sixth ribs near the sternum. As a piece of lung protruded at the opening and was of a livid color, it was extirpated with the actual cautery. The wound was then dilated, and the ribs kept apart with a wooden wedge, under which plan the portion of lung girt by the opening shrunk within the chest. The patient was soon completely well.

A fourth example of a protrusion of a piece of lung through a wound in the thorax is among the cases recorded by Ruysch. The servant of a seafaring man was wounded in the anterior and inferior part of the chest, and was immediately attended by a surgeon who mistook the protruded piece of lung for a portion of omentum and applied a tight ligature around it. Ruysch, who was consulted, soon detected the mistake which had been made, but he delivered his opinion that the wound would heal very well as soon as the tied piece of lung was detached. The event justified his prognosis and the patient recovered. He continues:

"After the battle of Waterloo I had a patient with a protrusion of a piece of lung four or five inches in length. The part was much bruised and could not be easily reduced. I therefore applied a ligature round its base and cut it off. Previously, however, I made an incision in it in order to ascertain whether it would bleed freely, which, being the case, induced me to use a ligature. I was afterwards informed by my friend, Mr. Collier, that the man died."

A more recent case is reported in the *London Lancet* for the year

1886, p. 466, where a case is reported by Dr. Demons, of Bordeaux, France, of resection of a portion of the left lung with the ecraseur, followed by hæmorrhage, which was controlled with the thermo-cautery. The patient had been injured, during a quarrel, with a knife. After the operation on the lung it was also found necessary to remove the left kidney. The patient recovered. Thus, of six cases here cited, five recovered and one died.

The lung was removed by ligature three times with two recoveries and one death. The remaining other cases, which all recovered, were removed by excision, by cautery, and by the ecraseur. These were all clearly operations of necessity, but convey information which must prove useful and instructive as to method in developing operations of choice undertaken for the relief of disease. I cannot refrain here from calling attention to the fact that numerous cases are reported where patients having phthisical symptoms are said to have been cured by gun-shot and other accidental wounds of the chest.

Thus well-marked symptoms of phthisis, asthma, and chronic cough are reported to have been radically cured or greatly relieved by the rough medium of a gun-shot wound. (See notes, *Medical and Surgical History of the War of the Rebellion.*)

Some tabulated lists of cases are reported of operations on the lungs for tubercular and other diseases. I shall not attempt to collect them, but rather to select such cases as serve to give the technique now in vogue, and by comparison with some of my own cases show wherein I think the present methods are faulty and subject to criticism. I shall further suggest measures which I think, if adopted, will give us a better command on the field and lead to a more extended practice.

The most valuable and comprehensive account of thoracic operations up to this date is embraced in the lectures of Rickman J. Godlee, published in the *London Lancet*, vol. i., for the year 1887.

In his first lecture he asserts that in some forms of pulmonary abscess surgical interference is obviously inadmissible; nothing, for instance, can be hoped from it in treating the lung, which is riddled by numerous tubercular cavities or the multiplied gangrenous foci which occur in the course of embolic pyæmia.

Those in which surgery has been, or may be, attempted, may be thus classified:

1. Tubercular cavities.

2. Cavities resulting from gangrene of the lung.

3. Cavities resulting from the bursting into the lung of abscesses or other collections of irritating matter from without.

4. Bronchiectasis, from whatever cause arising, and including those which depend upon the presence of a foreign body in the air-passages.

He follows with an interesting detail of historical references on the subject, showing the various attempts made by surgeons to cure abscesses and pulmonary cavities left by them by operation. Of the cases cited by him, the following alone can be quoted here as being in the direct line of thought I wish to pursue. He says:

1. F——, aged forty years. Advanced phthisis, with large cavity at left apex.

Resection of the third rib to allow the chest-wall to fall in. The patient lived a little more than a fortnight. Some retraction is said to have occurred.

2. F——, aged fifteen. Advanced phthisis, with consolidation and excavation of lower lobe of the left lung.

Parts of the second and third ribs were excised, and threads were passed through the pleura into the lung in order to insure adhesions if these were not present. Four days later an attempt to reach a large cavity resulted only in the discovery of a small one. The operation appears to have had but little influence on the progress of the disease. The patient died three weeks after the first operation.

3. F——, aged twenty-five. Advanced phthisis; cavities in the left upper lobe.

Parts of the second and third ribs were removed and a large cavity was opened. The cough and expectoration were very much relieved, and the cavity decidedly contracted, the patient living five weeks after the operation.

A far more heroic method of dealing with tubercular lung has been in recent years suggested by certain Italian surgeons who have made this subject a specialty, though it has been followed up by some observers in Germany.

Dr. Domenico Biondi showed first the possibility of an animal surviving the complete extirpation of a healthy lung, and then proceeded to demonstrate that the same might be done in an animal,

the lung of which had been previously inoculated with some of the sputum of a tubercular patient, and had actually become the seat of tubercular changes.

A very considerable proportion of the animals (rabbits, cats, and dogs, twenty-one in all) died as the result of the first or the second operation, but some survived and lived for a very considerable time afterward.

The dogs and cats were not very favorable subjects for the development of tuberculosis, but it is remarkable and interesting that in some of the rabbits tubercle was actually developed in the lung, which was removed, and after the removal the animal remained free from further development of the disease.

The conclusion that the author wishes to draw is obvious, but he hardly ventures to hint at the application of the treatment to the human subject, and it can scarcely be suspected that it will ever be placed among the recognized surgical procedures. It could only be applied in the early stages of phthisis, when the disease may be considered within the possibility of a practically permanent cure by other and simpler means. And, indeed, the same may be said of another possible deduction, namely, the removal of tumors of the lung. Diagnosis must clearly reach a much greater pitch of refinement before the physician could counsel or the surgeon attempt the removal of a primary tumor of the lung, rare as it is, and difficult as it must always be to discover in its earlier stages, when alone it could conceivably be extirpated. It must, however, be stated that in two cases of phthisis, parts of the lung have been actually removed by Ruggi, one of the patients dying in a few hours, and the other on the ninth day. And not only so, but tumors of the lung also have been removed, though it must be owned that the experience of the surgeons who undertook the operation is not very encouraging.

Weinleicher, in 1882, removed a round tumor as large as a man's head from the thoracic wall of a man aged 37, leaving a huge gaping opening into the chest and taking away a part of the lung to which it was adherent; the patient died twenty-four hours afterwards.

Kroenlein also removed a recurrent sarcoma in the same situation from a girl aged 18, taking away part of the sixth rib and some adherent lung. The end of this case is not reported in the interesting article of Albert's from which the reference is taken.

Gangrenous Cavities Resulting from Pneumonia.—These cavities are perhaps the most promising with which the surgeon is called upon to deal, especially if operation be not too long delayed. In the course of time, if the patient survive, the surrounding lung becomes condensed and inelastic; but in the earlier stages of the disease it retains more or less its normal characters, and the walls of the cavity are able to fall together like those of an abscess in the soft parts elsewhere. But delay is almost unavoidable, on account of the great difficulty of localizing the position of the cavity with precision and the still greater difficulty of ascertaining the absence or the presence of adhesions.

I do not think that the second point should be allowed to influence the surgeon in the direction of delay, and certainly should not interfere with an exploratory puncture, because, in the first place, experience shows that even adhesions which have been accurately diagnosed by the most competent observers may, after all, be found to have no existence, and in the second place, it seems clear that exploration with an aspirator needle may be safely made through a patent pleura, even if the instrument pass into a collection of putrid pus.

I do not say that mischief will never follow this procedure, and I am sure that it is wise to ascertain for certain the condition of the pleura before making a free incision into a lung containing septic pus; for if the non-adherent pleura be opened, and through it a drainage-tube be passed into a putrid cavity, very serious symptoms may result. This was well illustrated in a case of bronchiectasis, where we had ascertained a week or two previously, that there was some clear fluid in what was thought to be merely a remnant of the pleural cavity. On cutting through the intercostal space, it was found that the two layers of the pleura had become adherent since the preliminary puncture, but only by very weak adhesions, which easily broke down under the pressure of the finger and the expiratory efforts of the patient whilst the opening was being made into the bronchiectatic cavity.

This led to the opening up of a large remnant of the pleural sac, the walls of which were non-adherent, and the consequence was that the pus from the bronchiectasis, escaping into the pleura, set up a septic pleurisy from which the patient nearly died.

It will be well, therefore, to consider at the outset what should be

done when these adhesions, so commonly but yet not invariably found, are wanting. One plan would be that mentioned above, as recommended by De Cerenville as a precautionary measure—namely, to pass needles armed with silk through the pleura into the lung; but as in almost all cases the lung is solidified, and will, therefore, not fall away to any extent from the thoracic wall, even if no adhesions at all be present, I do not think that this, though quite unobjectionable, can be considered to be a necessary precaution.

The right method of procedure, though I confess it is not a very easy one, is carefully to stitch the lung up to the opening which has been made in the chest-walls. It is a difficult proceeding, because the parts are in a constant state of movement from the act of respiration, and because the lung itself is but ill suited to retain the stitches that are placed in it, and also because the hole in which the manœuvres have to be carried on is a rather deep one, and mostly obscured by the presence of blood. I have only once had to put this plan into practice, and though here it was only partially successful, it was sufficiently so to show that, with a little more care, the closure of the pleura might have been effected. We found in this case, at the end of a few days, that a part of the stitching had given way; but as no cavity was reached, no evil consequences as regards the pleura resulted, the wound remaining aseptic.

Of course, after the stitches have been placed, the attempt to open the cavity must be postponed for at least a week, and at the end of that time the instruments used must be sharp, and their employment gentle, lest the accident which it is intended to avoid may, after all, happen.

In his second lecture he quoted the following cases from Copeland and closes with the remarks which follow the report of the cases.

1. A boy, aged seventeen, swallowed a bone in November, 1883. He developed bronchiectasis, but completely recovered after coughing up the bone in February, 1884.

This I think, is most instructive, not only as showing that the bronchiectasis and induration of the lung, which had taken four months to develop, could be completely recovered from, but as indicating the line of treatment in such cases.

2. Dr. Magrath's case, where a piece of grass became impacted in the right lung of a boy of seven. Death occurred after ten weeks. The lower lobe of the lung was riddled with abscesses. The dia-

phragm (as in one of my cases) had been perforated by the abscesses, and there was secondary caries of the spine.

Dr. Cayley's case, which was one of a low form of pneumonia, resulting in a basic cavity containing five or six ounces of offensive pus and sloughs of lung substance. He had only been ill for five weeks, but had the appearance of a man in the last stages of phthisis. The cavity was opened in the ninth interspace, but the case ended fatally, being already too far advanced.

There were signs of old tubercular mischief in the lungs.

4. Dr. Solomon Smith, of Halifax, records a case where gangrene followed acute pneumonia, and where death followed an incision into the abscess after nine days.

5. Dr. Cayley's case of a gangrenous abscess following ear disease, in which Dr. Gould punctured the abscess with a trocar, but on introducing the tube, failed to drain the abscess at first; it afterwards, however, burst into the artificial opening, and the patient made a good recovery.

6. Some cases are recorded in a paper read by Dr. Mosler before the German Medical Congress at Weisbaden in 1883, in which he recommends the incision of the lung with the actual cautery for the extraction of foreign bodies.

I am not able to strongly endorse this advice (though with deep incisions it may possibly be advisable) for the use of the knife does not, as a rule, lead to formidable hæmorrhage, and the charring of the tissues must cause considerable difficulty in any exploration with the finger.

7. Dr. Ed. Bull, of Christiana, records a case of circumscribed gangrene of the lung which was opened successfully.

It may be taken for granted then, that the majority of the cases of gangrenous abscess which come into the hands of the surgeon are the result of acute pneumonia, and are situated near the base of the lung; and it may be added that his aid is most likely to be needed in those cases in which the gangrene is not very extensive, so that the patient survives the immediate effects of this process. Some of these cases, it is well known, recover spontaneously, the pus being expectorated; but in others a condition of things results such as is often met with in abscesses bursting spontaneously in other parts of the body—namely, that the opening being insufficient, and perhaps unsuitably placed, the sac is always more or less filled with the dis-

charges, which in the cases we are considering are always highly septic, and therefore irritating. The abscess, consequently, shows no tendency to close, but on the contrary, increases in size. It is not a good plan in such cases to wait long before making the external opening—that is, if the position of the abscess can be accurately determined—because as was pointed out when the subject of empyema bursting into the lung was discussed, the presence of fœtid pus in the bronchi and trachea is very likely to lead not only to serious consequences in the diseased lung, but also in the sound one; but, at the same time, it is not often wise to make an incision through the chest-wall until the situation of the abscess has been ascertained by means of an exploring trocar, and even then the troublesome question of the presence or absence of pleural adhesions has to be settled before the lung itself is incised.

Another case in point is the following:

Resection of the lung in incipient tuberculosis and operation for hernia of the lung.

On May 5, 1891, M. Tuffier resected the lung of a man, aged 25, with incipient phthisis, apparently limited to the right apex. He made an incision in the second intercostal space and exposed the pleura. In order to draw the apex more easily through the small incision he produced an extra pleural pneumothorax by separating the parietal pleura from the chest-wall around the apex; the membrane was lightly torn, but the hole was stopped with the finger and then with gauze, so that but little air entered the pleura. The apex of the lung was then seized with special forceps and drawn out. The area of consolidation, which was about the size of a large hazelnut, firm in the centre and slightly granular at the circumference, could be distinctly felt and defined. A silk ligature was then tied tightly around the protruding lung, five centimeters from the apex and two beyond the area of consolidation; the lung was cut off and the pedicle accurately sewn to the periosteum of the internal surface of the second rib, so as to avoid the production of pneumothorax. The divided muscles, layer by layer, were then carefully sutured with catgut; Florence hair sutures were used for the skin wound, and an iodoform wool dressing was applied. The patient was under chloroform for thirty-five minutes, and there was no disturbance whatever of the breathing or the circulation. An excellent recovery followed without fever, cough, or any sign of reaction, local or general.

The dressing was first changed on the sixth day, and beyond slight weakness of the breath-sounds over the whole lung, no abnormality could be detected. The dressing was left off on the ninth day, when the patient was well enough to be exhibited. On November 30, 1890, he also performed an operation for radical cure of a spontaneous hernia of the lung, returning the lung and sewing up the wound. The patient was well by the seventh day."

I shall include resection of the lung, or pneumonectomy, and incision of the lung, or pneumotomy, under the same heading, as I believe the same method of attack should be made in each.

"A patient presented himself at London Chest Hospital, with pain, cough and shortness of breath. Examination showed absence of movements of left side of chest, with anterior and posterior dulness; tubular breath sounds, with vocal resonance and fremitus increased; right side healthy. In the course of a few days the temperature ran up from normal to $100\frac{8}{10}$, but soon fell again; night sweats, with a free, fœtid expectoration, set in. At the suggestion of Dr. Samuels an aspirator needle was inserted between the fifth and sixth ribs, and two ounces of fœtid pus drawn off. Considerable tumefaction at the point of aspiration followed, and a free incision was decided upon. About three ounces of pus escaped, and a drainage-tube was inserted. Until this time it was thought the pus came from the pleural cavity, but when, a few days later, a portion of the seventh rib was resected and the thickened pleura incised, it was shown that an abscess of the lung about the size of an orange was the source of the pus. The cavity was washed out with a solution of perchloride of mercury 1–500, and a drainage-tube inserted. The patient began to improve in every respect, but on the evening of the fourteenth day he was suddenly seized with an epileptiform attack, followed by paralysis of the right arm. In an attack similar to this, a few days later, he became unconscious, was completely paralyzed, and died five days later. Post-mortem showed healthy granulations in the cavity of the lung. Smaller abscesses were found in the upper portion of the lung.

"The disease undoubtedly originated in pneumonia, and the close proximity of the pleura caused an extension of the inflammation and adhesions. Abscesses of the brain, the cause of death, were undoubtedly embolic in origin, which is claimed to be the rule in abscesses of the lung or pleura."

I have now done some twenty operations on the thorax, major and minor. Of these but two could properly be reported here as illustrating some points which I urge in the text further on. They are as follows:

April 9, 1888, was called by Dr. F. X. Spranger to see Mrs. F——, aged 40.

History.—Seven weeks previously, while visiting in a southern city, was taken with fever of a continued type. The doctor in attendance pronounced the disease "malaria," and treated the case on general terms as a common case of malarial fever. As the patient did not improve, she was advised to come to her home in the North, trusting that the change might be of benefit. On Dr. Spranger's first visit he found the patient emaciated, weak, pulse and respiration quickened, respiratory murmur faint in lower lobe of left lung, although not entirely absent. Marked tenderness on pressure, and the patient stated that there had been a deep-seated soreness and a little pain in this side from the first. This had been ascribed to the stomach by her attendant. Morning temperature, 101; evening, 102 to 102½. Percussion elicited some dulness over lower lobe of left lung; no increase in size of side or bulging of the intercostal spaces. There was some cough, with expectoration of muco-purulent type. During the whole sickness the patient had experienced light chills at irregular intervals. After consultation we decided that the condition was one of localized empyema, or pulmonary abscess affecting lower lobe of the left lung, and decided to attempt to locate it with the aspirating trocar. April 12th, under the influence of chloroform, the exploration was undertaken.

I selected the space between the seventh and eighth ribs in the centre of axillary line as being at about the upper level of the area of tenderness. Introduction of aspirating needle two and one-half inches straight in gave a negative result, then the needle was withdrawn from the lung and reintroduced downward and backward again with no result. Again I withdrew it, and this time thrust it downward, inward and forward and this time was rewarded with a few drops of thick fœtid pus. It was determined at this consultation to operate on the case, and the operation was fixed for the next day at two o'clock.

Operation.—The anæsthetic used was chloroform, and beyond the effects of shock and irregularity of respiration during the last part

of the operation there is nothing in regard to the anæsthetic worth recording. I commenced to make a four inch incision over the seventh rib from the axillary line forward. I next removed the periosteum and attached muscles; for cutting the rib I used the common rib shears. I now attempted to open the pleural cavity in the rib space but found at the point of attack the union between the pleural surfaces so intimate that this was impossible. Explorations further up gave me an opening through which I thrust my index finger. I found the lung intimately adhered to the chest-wall at all points. I now dissected the lung from its attachments, opening the cavity to the full length of the space from which I had removed the rib. I now directed my finger towards the diaphragmatic attachment of the chest-wall, dissecting my way carefully and thrusting back the lung. The struggles of the patient at this time were very great and the bleeding as the adhesions gave way quite free, as the edge of the lung folded up. I found the adhesions continued over the surface of the diaphragm. Suddenly I broke into a large cavity having its base on the diaphragm and its apex in the base of the posterior lobe of the left lung. There now came a great gush of badly smelling and very thick matter. During this part of the operation Dr. E. P. Gaylord who had charge of the anæsthetic pronounced the patient very weak, and stopped it temporarily lifting out the tongue to aid respiration. Dr. Spanger held the ribs well apart with stout curved retractors. I now with the finger separated all adhesions to the diaphragm, and costal pleura as far up on the upper side of the wound in the chest-wall as I could. I did this to allow the lung to collapse and thus get it up out of the way in order to better drain the cavity. The lung was partly infiltrated with inflammatory matter and contracted some, but to no great degree. With the finger as a curette, I removed all flakes of fibrin and granulations in sight.

With the finger I drew the lung into the opening and trimmed the abscess edges just as I would have done in any other region. We were satisfied that the cavity had an opening into a bronchus and the great problem now was whether it would do to wash out the cavity. This I did with a mild boracic acid solution at a temperature of 100, keeping the wound fully dilated all the time, and allowing a free outflow of the water. This done I inserted a flanged drainage-tube at the lower angle of the wound, left the wound open and enveloped

the whole side of the body in an ample antiseptic dressing consisting of gauze, mackintosh over this to distribute the discharge, and lamb's wool over all. The patient reacted well, the pulse improved, the temperature fell to normal. On the seventh day the dressing began to smell and the first change was made. Found the cavity smelling quite badly, but little discharge. With the patient in a sitting posture we used a claret-colored solution of permanganate of potash. We allowed the cavity to fill from below until the patient coughed when we stopped the flow and allowed all the liquid to escape; the cough brought sufficient of the solution through the bronchus into the mouth to color the saliva. After this as often as the cavity became foul we repeated the irrigation and to the very last time, the patient was able to raise some of the solution. The general progress of the case was good, and by the middle of May the opening had granulated, and the patient was well. Her health has remained good.

A. M., æt. 19, patient of Dr. Isaac Bentley was one of the victims of the Tilden school fire, and was severely burned about the hands and face. Inhaled flame and smoke and complained constantly of left lung for months afterwards. In July, 1890, was taken with several other members of his family with typhoid fever.

The fever in his case was rather more severe than in the others, and about the middle of August he was taken with a sudden oppression of breathing and constitutional symptoms of hæmorrhage. On examination Dr. Bentley found a large accumulation of blood pushing down the diaphragm and filling the left pleural cavity. It was at this time that I was first consulted. I confirmed the diagnosis, and as the bleeding had stopped I advised delay for the present. August 19th, the oppression of the breathing having increased to such an extent as to cause great embarrassment of respiration and circulation we decided to tap him. This was done under strict antiseptic precautions, and three pints of liquid blood drawn off. The patient was much relieved and seemed better for some days. Ten days later was again called and found the patient again suffering from oppression of breathing. Tapped again and drew off about the same amount of blood. I left with Dr. Bentley, the patient being very comfortable. Two hours later I was hastly summoned and found the patient had suffered from another severe hæmorrhage, the side being tightly distended, and diaphragm pushed

down making a rounded fluctuating tumor in left hypochondrium. The patient was suffering from combined blood loss and pressure, and his friends were told to prepare for the worst. His death seemed sure. After hard work on the part of his attending physician he rallied, and except for the pressure symptoms his condition was much improved. At the request of the family Dr. E. L. Shurley was called in for consultation September 4th, and after examination agreed that the bleeding proceeded from an abscess of the lung, and advised a third tapping. This the patient and friends refused to allow, the friends being particularly against doing anything further. Four days later I was again called, and found the pressure symptoms much worse, the patient being in such agony that he not only consented, but demanded that something should be done to relieve him. The patient was given chloroform, and on introducing the trocar the contents of the thorax was found to be pus. Free incision was decided on and the space between the seventh and eighth ribs in the axillary line chosen to make the opening. Incision made, measured three inches, and a full gallon of pus flowed slowly through the wound. The patient rallied well and was much relieved. Dressing changed four days later, some discharge; new tube inserted and wound redressed. Patient seemed to do fairly well until October 11th, when I was again called. The tube was still continued by Dr. Bently, but on examination it was found that it no longer drained the whole cavity. Adhesions had formed a second cavity, which occupied the upper half of the pleural space.

The patient was again placed under chloroform and the space between the fourth and fifth ribs selected as the base of accumulation. Opening two and one-half inches long entered a cavity holding a quart of very offensive pus. Both the old and new cavities were now thoroughly washed out with claret-colored permanganate of potash solution. Daily irrigation with calendulated water was kept up. The patient did not seem to improve, the pulse being weak and as high as 140 beats per minute, respiration ranging from 24 to 36. Temperature from 102 in the morning to 104 in the evening. The patient seemed in desperate straits and I decided on radical measures; accordingly on December 2d, one month and twenty-one days after my last operation, under chloroform, I resected four inches of the fifth rib. I now opened the upper cavity through the rib space and with my index finger broke down the adhesions dividing

the pleural space as far back as the finger could reach. I next turned my attention to the stump of the lung in the posterior part of the upper cavity. It seemed firmly adherent in all parts, and completely solidified. With the finger I broke up all adhesions and pockets around it and finished by washing out the cavity with a warm boracic acid solution.

The patient's surroundings were not the most favorable, his parents living in a small cottage heated by soft coal stoves. After much urging he was removed to St. Mary's Hospital and placed in charge of the sisters. The upper opening now ceased to discharge and tube was withdrawn. His general condition began to improve, and by the middle of January he returned home cured. Examination at this time shows the lung to have fully expanded and no trace of the trouble left but the scars which mark the lines of incision.

Operation.—May be undertaken, when there is a lung-cavity, due to bronchiectasis, gangrene or hydatid, and it is evident that drainage is imperfect.

The case is urgent when the expectoration is profuse, foul and irritating, when the cough is constant and exhausting, when sleep is interfered with, appetite is poor, or lost; when there is diarrhœa, night-sweats, chills, or the commencement of hectic fever.

The operation should be undertaken before the whole lung is infected, and when only one lung is diseased.

Anæsthetic.—I have now imperfect notes of more than twenty cases of thoracic surgery and have used chloroform in most of the cases. In those with weak heart action I have used narcosis from whiskey, using from 6 to 12 ounces according to the age and condition of the patient and the degree of effect desired. In every case the whiskey is supplemented with small doses of chloroform as needed to keep the patient in the operative stage of narcosis. Care should be taken not to allow the patient to rise up suddenly during the excitement from the anæsthetic, and in lifting the patient from the bed to the operating table, care should be exercised lest the patient be doubled up, or the chest constricted, thus forcing fluids into the trachea. I have seen at least two patients almost drowned in this way.

Incision.—It will be seen from the cases taken from current literature that small incisions have so far been the rule. Much stress is laid on the fact of determining the existence of adhesions, and

where these are absent it is advised to first stitch the lung to the costal pleura, and wait until adhesions form before proceeding to open the cavity. It has always seemed to me to be timid, unsurgical, if we have sufficient grounds upon which to base the operation, in the first place.

In the cases reported by me I violated all these rules, and now looking back I do not think I did as good work in either case, as I might have done with a larger opening. In both my cases I freed the lung from the chest-wall, by tearing up all adhesions; in the first case it would have been necessary to incise the lung, in order to reach the cavity; it would then have been imperfectly drained, from its shape and situation, and could not have contracted as rapidly as it did after loosening it from its attachments to the diaphragm. In the second case the patient did not improve but remained very ill until I tore up the adhesions and from that time on he constantly improved.

I think all adhesions should be broken up, and the whole cavity thoroughly drained. I do not think we have greater cause to fear septic pleurisy after thoracic operations than we have cause to fear septic peritonitis after abdominal operations, where pus or other irritating fluids escape into the peritoneal cavity, and we avert all trouble by thorough irrigation and complete drainage. Now as to the opening in the chest-wall. Is it not possible that in the future if we can find a feasible way to open the lung cavity, that the exploratory operation for purposes of diagnosis, will be both more common and more useful than it is now in abdominal surgery?

How then shall we make even a guess at the way this can be done, so as to avoid the most important structures and yet give room to work with ease?

The opening should be so planned and so large, as to give us complete control of the field, thus allowing us with the eye and finger to examine every part of the pleura and every portion of the pulmonary tissue. I have long been convinced that the ribs are the only bar to the complete mastery of the situation here; if there were no ribs, or if these could be dispensed with, dealing with the lung and its diseases would present no special difficulties other than those arising from its structure and physiological functions.

We need an opening here like that in the linea alba in abdominal surgery, one giving the minimum of danger and the maximum of

usefulness. What this will eventually be, we can no more than conjecture now, and it will take many trials and much work to finally perfect it and make it stand the test of practical experience.

In a case of gangrene of the right lung resulting from whiskey-drinker's pneumonia, which presented itself in the charity ward of Grace Hospital, Detroit, I determined to open the chest after the following plan if necessity demanded operative interference.

The case began to improve and I decided to wait, after a consultation with a number of my colleagues. Three days after we came to this decision, the patient while sitting up in bed, became faint, fell back on her bed and expired. Post-mortem examination revealed the pleural cavity foul, full of blood and covered with decomposed fibrin; the lower lobe of the lung necrotic. Death was caused by hæmorrhage, from the bursting of a bloodvessel in the lung.

Plan of Operation.—To avoid the mammary gland I decided to commence an incision in front of the line of the coracoid process, and carry it straight across the ribs to the scapular line between the sixth and seventh ribs.

In order to miss the superior intercostal I decided to commence the incision over the second rib, but to make the third rib the upper margin of my flap. From the commencement to the end of my proposed line of incision I intended to divide all structures down to the ribs, and after controlling all hæmorrhage, to resect portions of each rib from the third to the sixth. I now proposed to carry an incision between the sixth and seventh ribs with a scissors far enough forward to give plenty of room, even if this point was at the junction of the costal cartilages with the ribs. By now carrying the incision along the junction of the cartilages and ribs to the upper border of the third rib, and from this point to the place of commencement, at the point where this rib had been resected, I would have my opening complete. I planned to allow the integument to be one inch broader than this flap around the whole margin so that when the flap was laid back and stitched in place, the integumental suture line should not correspond with the line of incision into the chest-wall. The great question, of course, was how to deal with the bloodvessels; I hoped to manage these with plenty of catch forceps, and to avoid the internal mammary by keeping well away from the sternum. I argued that my carrying my lower incision to the point

of election would give me a perfect drainage-point; that by resecting the ribs in the proposed line I should make a trap-door flap with all the ribs in it, which could be lowered and thus completely open the cavity; that the free opening would allow collapse of the lung, thus rendering it easier to manage than when it does not collapse and moves with each movement of the chest as it does in the small opening.

Observation at the post-mortem examination convinced me that no smaller opening could possibly have enabled me to manage the gangrenous lung tissue. I intended to clamp and ligature it in mass, and then sear the stump with the cautery, or, by imitating the cases of hernia cited above, drag the diseased lung through the chest wall, confine it there, and allow nature to slough it off at the line of constriction. If this plan can be carried out at all, it may be possible to include the second rib when necessary, or a central section of this rib may be removed to allow it to contract and help to contract the chest-wall after operation.

With this kind of an opening caseous masses could be felt and removed, dilated bronchi, when obstructed and filled with secretion, incised, drained, irrigated, the foreign body removed and the opening in the bronchus continuously drained by sewing in a bone drain, or closed with catgut. Abscesses could be incised, curetted and closed or cauterized to control bleeding and left wide open to drain into the pleural cavity and heal by granulation.

If, according to Godlee, we may never hope to see a whole lung successfully removed, we may yet hope that large portions of necrotic tissue may be removed and the patient recover.

A word more about the sudden deaths from slight operations, and even from simple irrigation of the pleural cavity.

In many of the reported cases death occurred after irrigation had been practiced many times. I think some of these patients are killed from shock caused by fluids too warm or too cold; others are drowned by fluids going into the trachea through an open bronchus; or that the lung floated on top of the fluid like a cork, empties partly pent-up secretions into the trachea suddenly, and thus causes death from asphyxia. Thus, one of my cases became faint and livid, but, on coughing, brought up much pus and mucus, and at once felt better. Every portion of a thoracic operation and after-treatment should be guarded by strict observation of Listerian principles.

THORACOPLASTY.

By H. F. Biggar, M.D., Cleveland, O.

At Ventnor, in the Isle of Wight, is a consumptive hospital. The location is very suitable, as the island is formed of limestone rock covered with a few inches of light soil. The drainage is so perfect that no mould collects in dark closets or deep cellars. At this beautiful island hamlet I found patients suffering from pulmonary diseases greatly relieved, and some who were apparently incurable restored to health by surgical procedures upon the walls of the chest or upon the deeper structures within. The operations were for removal of portions of the shafts of ribs, for hydrothorax, pyothorax, pneumonic abscess and growths of a sarcomatous and hydatid character.

Estlander has improved the surgery of the chest, and it is now abreast with the advancement of surgery of the abdomen and of the brain. To-day the ribs are separated from the cartilages or sternum or resected along the axillary line for adhesions of the deep structures, for the purpose of freeing the lung from its abnormal encasement. The ribs thus severed will fall forward and meet the lung tissue, and permit the development of the lung. Where these adhesions exist the ribs act like parallel hoops and must be separated.

Thoracoplasty will restore many who are now hopelessly condemned. It has already given new life to patients afflicted with osteo-chondroma of the chest-walls, to exostosis of ribs, to neoplasm of the mediastina, and to gangrene of the lungs. May we not hope that in foreign bodies in the bronchi, where tracheotomy has proven useless, that ere long bronchotomy through the chest-walls may not be an anatomical impossibility? If bronchotomy can be performed with success, many lives will be saved. It will then do what tracheotomy has not been able to do, as in that recent notable case of the Rev. Dr. Bothwell, of Brooklyn, N. Y., who inhaled a small cork. Although his surgeons could reach the cork below the bifur-

cation of the trachea through the bronchus, and even fixed the screw into the cork, yet they were unable to extract it, and thus a valuable life was lost. Experiments are going on with reference to this operation, and it is found that the position of the arm upward and forward will separate the scapula from the vertebræ sufficiently to permit the resection of ribs, and by skillful dissection avoid the aorta and nerves, and thus reach the primary bronchi. As yet, these experiments on dogs have proved fatal. Were bronchotomy resorted to before any other operation, the chances of success might be better. The question arises, would the surgeon be justified in first operating for bronchotomy without resorting to tracheotomy?

The following is a report of five clinical cases demanding surgical interference. One case recovered without an operation, and one recovered where two operations were performed without accomplishing the end intended, except that he was benefited in the operation *per se.*

Case I.—Resection of a portion of the shaft of the sixth rib. Mrs. ——, æt. 37, mother of five children, had a history as follows: A retro-mammary abscess of the left side, with necrosis of the sixth rib. The abscess had appeared fifteen months previous to my first visit. General health impaired and patient anæmic. Douglas's pouch contained fluid. I removed the necrosed part of the rib, aspirated Douglas's pouch *per vaginam*, and removed two ounces of pus. Gave Silicea 30x. Recovery. Query: Did the pus burrow from the left mamma to the diaphragm, thence through the ligamentum arcuatum externum, by way of the quadratus lumborum, or may it have followed the sheath of the abdominal aorta to the pelvis, filling Douglas's pouch?

Case II.—Thoracoplasty. Resections of portions of the shafts of the sixth and seventh ribs.

October, 1892, J. B., æt. 43, laborer. In February, 1892, had pleuro-pneumonia, which terminated in pneumonic abscess with perforation of the chest-wall, at the sixth space, two inches below the nipple and to the left. Previous to coming to me, while in another hospital, drainage was attempted. The health was much impaired, the urine albuminous. The probe could touch the chest-wall at a point corresponding to the inferior angle of the scapula. Removed three inches of the sixth and seventh ribs. The fistula was a guide to the abscess, which was very large, as determined by the probe.

The abscess was irrigated with a 1 per cent. solution of carbolic acid and drained. The patient did not do well, so changed the irrigation to an injection of bichloride of mercury in the proportion of 1 to 10,000 and 15,000; still no improvement; then gave permanganate of potash for awhile, which was followed with boracic acid. The general health did not improve, and, being suspicious of the medicated irrigations, they were omitted. Washed with sterilized water, and the patient gradually improved; the cavity filled up and the left chest increased coequal with the right. The case was tedious, for he was very indiscreet in regard to intemperance and exposure. Remedies, Hepar and Bryonia. The abscess was connected with a bronchus.

Method of Operation.—The operation was performed as follows: The patient was given a general soap bath the day before the operation. A thorough action of the bowels the night before, and the morning of the operation the axillary cavity shaved. Examination of the water showed albumen. At the time of the operation the chest was washed with bichloride of mercury 1 to 2000, and the surrounding parts protected with towels saturated with the mercurial solution. A vertical incision of four inches was made over the opening of the fistulous tract and down to the intercostal muscles; the parts were forcibly retracted and the periosteum of the sixth and the seventh ribs split in the middle line of the long axis of the shafts. With the staphylorraphy periosteum peeler of Mr. Thomas Smith, the periosteum is easily separated from the inner surfaces of the ribs to the extent desired. Removing the periosteum in this way, the intercostal arteries are better secured, and we avoid any hæmorrhage. The ribs were severed with a Hayes saw; a broad metal retractor was placed under the rib, protecting the pleura; the edges of the cut ribs were smoothed with bone forceps, and the periosteum of both ribs cut through the middle with blunt-pointed scissors, and used as coverings to the ends of the ribs, after the manner of periosteal flaps in amputations. The pleura is in full view. A soft metal probe is put into the fistulous tract, which serves as a guide, and the opening gradually enlarged by dilators sufficient to insert a large drainage-tube. The abscess is thoroughly cleaned with carbolic acid solution of 1 per cent., drainage-tube inserted and held in position by the eyelet of the flange; the edge of the external incision is sutured with a silkworm-gut; the mouth of the tube pro-

tected with sterilized gauze, covered with a rubber dam, and the dressing is complete. The patient was given Hypericum 3x every two hours. The next day the outside soiled dressings were removed, the cavity washed out with a carbolic acid solution of 1 per cent., and the sterilized gauze applied and covered with the rubber dam. The same manner of dressing was continued for ten days, with the exception of the medicated washings. The carbolic acid solution was changed to the bichloride, 1 to 5000, then 1 to 15,000. This was continued for four days, when permanganate of potash was substituted for three days; then boracic acid for three days. These medicated washings seemed to retard the process of healing. Finally, sterilized water was used, but the chest-pains were not relieved. All were abandoned and the patient began to improve. The drainage-tube was changed every three days, and at the end of six weeks removed, the patient being virtually well. On examination, the urine was normal. The diet was sustaining and nutritious.

Case III.—Thoracoplasty. Resection of four inches of the shaft of the seventh rib.

Mrs. ——, æt. 29, married, one child. Fell down a flight of stairs and struck the newel post, injuring the seventh rib of the right side immediately below the nipple. The accident was followed with periostitis and necrosis. The rib was curetted to the healthy tissue, the disease of the bone returned, and I resected four inches of the seventh rib with recovery.

Case IV.—Thoracocentesis, followed by thoracoplasty. Resection of the shafts of the sixth and seventh ribs.

Miss L., æt. 23. In August, 1886, I removed a 47-pound ovarian tumor. In May, 1887, her physician, of the opposite school, called me in consultation for pleuritic effusion. Thoracocentesis was decided upon, and we removed fifty-two ounces of serum. Did not completely empty the cavity. Drainage was established by another opening above at the fifth space. Septic symptoms followed, and we resected three inches of the sixth and seventh ribs. The patient improved for a few weeks, but died, twelve weeks after the resection, from tuberculosis.

Case V.—Thoracostenosis, thoracoplasty. Resection of the shafts of the sixth and seventh ribs.

Lilly S., æt. 10. Four years before operation fell against a door-knob, injuring the left side. Pneumonic abscess formed, involving

lobes of the left lung, with spontaneous perforation at the sixth space. There was deformity of the left chest from collapse of the entire lung. The thoracometer showed four inches difference in the semi-circumference, lateral curvature of the spine; the patient was emaciated and hectic; temperature, 102.4; pulse, 135; the finger nails were clubbed; the pyrexia was continuous; œdema of the skin pronounced; and the urine albuminous. I resected three inches of the sixth and seventh ribs, and explored the lung cavity, which was so large that the finger could easily surround the apex of the heart. Curetted the cavity, washed out with sterilized water, and gave Arsenicum. Good recovery, with partial reduction of the contour of the chest and a lessening of the curvature of the spine. The abscess was connected with bronchus.

Case VI.—Thoracoscopy.

Mr. ——, æt. 19, unmarried, attempted suicide by shooting with a revolver in the left chest. The ball entered the fourth intercostal, midway between the nipple and the middle of the sternum, and was *imbedded* in the *walls* of the *heart*, perhaps in the septum, between the left ventricle and auricle. The physicians who arrived before me probed and found the location of the ball. By keeping the probe on the ball, the probe was moved corresponding to the heart's contraction. Did not interfere surgically. The patient was carefully nursed and all inflammatory symptoms kept in subjection with Hypericum, Aconite and Bryonia. In two weeks he left the hospital and is now living, though eleven years have passed since the shooting.

Case VII.—Tracheotomy for foreign body.

Master C., æt. 13, had a bone collar-button lodged in his air-passage. He came to the hospital eleven months after the accident. The boy was emaciated and hectic, and the right lung was seriously implicated. I performed tracheotomy low down, but failed to find the button. Within four days after the operation the patient began to improve in his general health, yet we felt certain that the button was not dislodged by the operation. The parents were solicitous for another trial. After the lapse of six days the tube was removed from the trachea, and exploration carefully and thoroughly made. The second attempt was also a failure as to the finding of the button, yet the patient continued to improve, and returned to his home in Virginia, having been in the hospital a month. About two months

after his return, during a violent fit of coughing, he expectorated *the button.* His health is completely restored.

Suggestions.—Before the operation, let the patient and operator closely observe antiseptics and have the technique of the operation perfect.

If an aspirator is to be used, boil the needle in soda or liquor potassæ before sterilizing.

Before inserting the needle, pull the skin a little to one side before cutting, and make a valve-like flap, which may be of service later.

Before inserting the aspirator, use a hypodermic syringe; it will determine the character of the fluid, if any.

If there are pus clots, or if the discharge is fœtid, wash out the cavity after excision with boracic acid, permanganate of potash, Labbarraque sol., or carbolic acid 1 per cent. When clots or fœtid discharges are removed, cease the irrigation.

The thoracic fistula will assist in determining the parts of the ribs to be resected.

If there is no fistula, try and establish drainage along the axillary line, in front of the latissimus dorsi muscle, where the pleura is more prominent, and between the eighth and fifth ribs, in front of the angle of the scapula.

The pleura may be very thick, so guard the trocar or knife, that it may not puncture the lung.

The semi- or recumbent position is the best.

If merely thoracocentesis, watch the pulse, for fear of syncope. If blood appears in the fluid drawn, or the patient coughs, stop.

Never empty the cavity at the first *drawing.* Examine the urine for Bright's disease or amyloid changes.

The safest and best irrigant is sterilized water. For fœtid discharges use carbolic acid, permanganate of potash, Labbarraque sol., or boracic acid.

Recollect that a small diseased area may secrete large quantities of pus.

If the space between the ribs is so narrow as to interfere with proper drainage, remove an inch of a rib.

Let the dressings be enveloped with rubber dam.

If the abscess is large, two openings are better by resection of the ribs above and below.

Avoid the intercostal artery; it lies along the inferior border of the rib.

In punctured wounds of the lung, if hæmorrhage exists, carefully examine the intercostal artery.

Higgins's empyema-tube, with flange, is the best thoracic drainage-tube. A corrugated white rubber tube is next best.

Use the thermo-cautery in deep-seated disease.

In gangrene of the lung the only hope is in thoracoplasty.

After resection of the ribs use the thermo-cautery in its removal. The mortality is large, but without it the case is *hopeless.*

Beware of the drainage-tube. A physician failed to guard a tube with a safety-pin. It slipped into the pleural cavity, and I had to resect a portion of a rib to remove the lost tube.

Exclude air from the operations upon the chest-wall as far as possible. Blunt knives are preferable to sharp ones.

In foreign bodies in bronchi, statistics are in favor of non-surgical interference.

Do not remove the drainage-tube too soon.

It is not always necessary, though it is safer, to excite adhesions of the pleura before operating.

Chloroform is the best anæsthetic.

If cavities are to be opened, if possible do not enter from behind for fear of hæmorrhage, from severing vessels which mainly lie along the posterior part of the bronchi.

In injuries to the chest from bullets be cautious in probing, and carefully deliberate before attempting the extraction of the ball.

I have found that washings of lung cavities, as a rule, are injurious, and not demanded after pus-clots and fœtid discharges cease.

For thoracocentesis I use Tiemann & Co.'s aspirator.

Do not "incise a putrid cavity of the lung unless the pleural surfaces are adherent."

In "localized gangrene, if it has already lasted some time, the danger is not so great; adhesions are usually present under these conditions, and the lung is so consolidated by inflammation that it is in but slight danger of collapsing."

"In acute cases and in bronchiectasis it is impossible to be certain. An attempt may be made to find out by ascertaining the mobility of the lung. If a needle be driven through an intercostal space into the pulmonary tissue, it will show to a certain extent by

its movement whether the lung is fixed or not. In some instances it may be possible to suture the two surfaces together and wait for a week, or to procure adhesions by means of the cautery applied to the intercostal muscles."

Are *tracheotomies* necessary for the removal of foreign bodies from the air-passages?

VIVISECTION AND PULMONARY SURGERY.

By Walter F. Knoll, M.D., Chicago, Ill.

Modern surgery has made it possible to safely enter every cavity of the body except the thorax. Except for a few simple lesions and under very special conditions, it keeps a closed door, and the faithful and aggressive surgeon must pass by and leave his patient to the few meagre chances which nature parcels out to him. The many methods which have been adopted and tested for surgical interference with the organs of the thorax have been in a large measure unsatisfactory. It is only in diseases of the thoracic wall and the pleuræ that our ideal has been imperfectly attained. The names of Estlander, Koch, and Bull are inseparably connected with the progress which has been made in this direction. When the surgeon has attempted to go beyond these structures there were two serious complications which have confronted him, and which have in a measure barred his further progress. The first of these is hæmorrhage and the second is collapse of the lung. The former is now fairly well managed with the actual cautery and aseptic ligature, but the latter remains an unsettled problem.

About ten years ago, when pulmonary surgery was a subject of special study, I became intensely interested, and from that time to the present I have carefully noted the experiments and the reports of clinical work of other men, and in all my thorectomies for pleural and costal diseases, and in my vivisections for class demonstrations, I have tried to discover some means by which the lung and pericardium could be operated upon without danger from hæmorrhage or collapse of the lung.

The enthusiasm which was then manifested in this work is well-known to the members of this Congress, and it perhaps has lost none of its interest even at the present time. The large number of localized lung diseases which are untouched by remedies or climate, and which in spite of all the known means at our command gradu-

ally progress until they destroy the life of the patient, has made pulmonary lesions in all time the most interesting and important subject in the category of diseases. Every surgeon at that time was testing his skill, and the surgical journals were reporting with each issue new cases of pneumotomy and pneumectomy. A young Italian surgeon was so confident of the efficacy of his art that when his *fiancee* was blushing with the fire of an incipient phthisis, tested his skill, and when he was rewarded with a bitter failure ended his existence with his own hand. The interest did not abate until the cool and logical statistician published the reports of cases and showed the futility of the efforts which had been made. But from these statistics a few important deductions may be drawn, and they clearly point to a road which ultimately must lead to success. Of the successful cases reported there were present antedating the operation certain pathological changes in the pleuræ, and they were produced either as a part of the disease for which the operation was made or else as independent processes. In 80 per cent. of the successful pneumectomies reported there were firm adhesions betwten the costal and pulmonary pleuræ, and to-day it is a law well established in pulmonary surgery never to attempt to operate upon the lung unless there are extensive pleuritic adhesions, and Dr. Koch has given us a reliable test by which this can always be known before the operation is undertaken. He says, thrust a long needle into the lung, and request the patient to breathe. If the outer end of the needle rises with inspiration and falls with expiration, there are no adhesions. If the outer end of the needle does not change its relation to the body with respiration there are adhesions. Firm pleuritic adhesions are an absolute prerequisite before lung tissue can be safely interfered with surgically. When this is accomplished the lung falls within the dominion of surgery, and he deals with it as he does with the rest of the organs of the body.

During the past few years I have slowly worked out a method by which these adhesions can be produced by artificial means, and the lung tissue entered and operated upon without fear of collapse of the organ or great danger from hæmorrhage. While some authors teach that the collapse of a lung during an operation is no serious complication, yet those who have had the unfortunate occurrence have fears which are not founded upon theory. The immediate shock and the subsequent sepsis and countless other coincidences make it

imperative upon the surgeon never to court such a danger. The means by which I have produced pleuritic adhesions and the results which I have obtained upon the lower animals, I shall briefly recount. The animal which is selected for the experiments is a dog. The side upon which the operation is made is shaved and rendered clean and aseptic. The operator, assistants, instruments and materials used during the operation and for the dressing are prepared with all possible care. The animal is placed under an anæsthetic, and when the region over the particular part of the lung which is to be operated upon has been selected, an incision is made along the course of the rib through the skin and adipose tissue about four to six inches in length. This tissue is dissected from the muscles on either side of the line of the incision for about one and a half inches. The folds are held back with two retractors in the hand of an assistant, a needle made especially for this work, threaded with number 8–10 catgut, is held in a strong needle holder.

The operator places the thumb and index finger of his left hand on a rib at a point which marks the outer border of the area which the adhesions are to take place. The needle is then passed close by the thumb through the intercostal tissue down into the lung, carried through a section of the lung tissue and out through the intercostal space on the other side of the rib. The stitch includes a rib, intercostal muscles and lung tissue. It is tied with only a mild amount of tension for fear of tearing the lung tissue. A second one is passed in the same manner as the former, and only a quarter of an inch from it, a third and so on until the lung has been stitched to the rib for two or more inches. Now, on either side of the rib and corresresponding with it the intercostal tissue is stitched to the lung by a back and under-stitch so placed as to include all of the pulmonary pleura and fasten it to the chest wall. If it is desired to remove more than one rib or extend the operation, a second rib and intercostal space can be treated, as the former and the field are made almost indefinite in size. The intercostal stitches are placed at right angles with the costal ones. The kind of stitch used is the continuous, as it answers every purpose and expedites the operation. In the centre of the field of operation a silk thread is carried around the rib to serve as a landmark in making the second operation. Catgut absorbs rapidly, and in several secondary operations I could not find a vestige of the catgut. The wound was made clean and

thoroughly asceptic. Iodoform is sprinkled over it, a piece of iodoform gauze laid over the stitches, the end of which hangs out of the lower end of the wound. The skin is loosely fastened over the gauze with a loose continuous suture, and the wound closed with a voluminous antiseptic dressing. This latter need not be removed for from five to seven days unless there are evidences of sepsis, and in such an event it is treated the same as an infected wound. There is no danger of septic material entering the thoracic cavity. At the end of from six to eight days the secondary operation can be made, which consists usually of the resection of a rib and the entrance through the pleura into the lung with the actual cautery. It is not necessary in all cases to remove the rib, but since generally one requires more space than can be obtained between the ribs the method which I have mentioned is the best. The depth which one can go in the lung with the cautery depends upon the size of the subject. It seems safe to go fully one-half the thickness of the lung, and the incision should be in line with the ribs to avoid cutting into the adjoining lobes which may be in close proximity to the spine. To accomplish this work easily it is necessary to state some of the rules which have been learned by experience. In my early attempts I resected the rib first and then tried to stitch the costal to the pulmonary pleura, but the tissue was so thin and yielding that air invariably followed the track of the needle, and either collapse of the lung or sepsis resulted, and sometimes both. Then I removed all of the muscles except the internal intercostal and stitched without resecting the rib; this also was a failure for the same reasons as the former. Then finally no muscular tissue was removed, the stitches introduced as recommended, and every trial was successful. I am of the opinion that in the human subject where there is much emaciation, one can stitch through skin and all without making the primary incision and dissection. There must always be enough extra pleural tissue to close the tract of the needle. The number of stitches which one uses has nothing to do with the results so long as enough are applied. The ordinary needle is of little value in this work. The curve is not correct, and the cutting surface reaches too far along the shaft. For my last experiments I used a needle which I had constructed especially for this work. It is made of round steel wire with a spear point, the edges of which extend only about one-eighth of an inch along the side. All the tissues are easily punctured and the long

tapering cutting point of the ordinary surgical needle did an amount of wounding which was wholly unnecessary. These needles are bent on a perfect circle, and they extend $\frac{9}{16}$ of a complete circle. The diameter of the circle is one and a half to two inches. They can be obtained from Truax, Greene & Co., of Chicago.

Before the operation is begun the pulmonary lobes must be outlined and their limits avoided unless one wishes to stitch two of them together and produce adhesions between the lobes as well as between the pleuræ. But fortunately for surgery in a large percentage of the diseases for which this treatment is indicated the difficulty is primarily intra-lobar. There is no part of the chest which cannot be entered so long as the rules which I have given are carefully observed.

In pericarditis with effusion, where the fluid cannot be removed with an aspirator, preliminary stitching followed by resection and drainage may some day be considered advisable and proper.

The results which I have thus far obtained upon dogs are eminently satisfactory. The specimens which I will show you prove how absolutely harmless it is to both lung and pleuræ. There are no traces of pneumonitis and the pleuritis is confined wholly to the tissues enclosed in the suture. The adhesions are firm, and if the suturing had been done as thoroughly as in the later cases the adhesions would cover the whole area. The animal was killed eight days after the preliminary suturing. What inferences may we draw from these experiments, and what value are they to humanity? In my judgment it furnishes a new hope to a large number of our race who by the aid of our present knowledge of therapeutics are under sentence of death. The child with a foreign body in a bronchus, the athlete with a ruptured lobule and subsequent infection and abscess, the victim of a localized tuberculosis, the pyæmic with a metastatic pulmonary abscess, the victim of a pulmonary cyst or tumor, and indeed many others which could be mentioned are subjects which under this treatment can find relief and cure.

If opening a tubercular joint and removing the colonies, followed by perfect drainage, cures the limb when all other methods have failed, is it not reasonable to believe that the same treatment applied to lungs will give equally good results? The great reason why lung tissue, when it begins to degenerate, shows so little disposition to repair is because the drainage at best is imperfect and difficult.

I have known several cases in my practice, and there are perhaps members in this Congress who, by lowering the head and chest, have evacuated a pulmonary abscess, and which marked a change in the tide of their diseases. Drainage properly established is the greatest remedy for restoring degenerating tissue, and by the methods here outlined it can always be accomplished. However, I have no boastful claim to make. I shall carefully submit it to time and test, the two elements which ultimately settle the intrinsic value of every innovation.

Discussion.

C. E. Walton, M.D., of Cincinnati, who had been assigned to a discussion of Dr. Biggar's paper, then presented his views as follows:

The papers just presented are valuable for two reasons: first, on account of what they specifically state and illustrate, and, secondly, on account of what they leave unsaid, but suggest. The subject of thoracic surgery is both new and old—so old, in fact, that having been well-nigh forgotten, it comes to us in its recent resurrection with all the impetus of a novelty. We have been kindly spared the recital of the history of thoracic surgery, and have been introduced at once to one of its most modern phases. I cannot forbear, however, alluding to the first authentic operation of rib resection, done ages ago, under the influence of a profound anæsthesia, and, judging from the results, according to the principles of an enlightened antisepsis: "And the Lord God caused a deep sleep to fall upon Adam, and he slept; and he took one of his ribs, and closed up the flesh instead thereof." This operation, however, has not been reported as forming a basis for surgical imitation, but those who always want authority for their procedures can find some warrant in this bit of history for the so-called mutilation of the human form divine. What was done with that rib is "another story," and foreign to the subject in hand.

Passing from sacred to profane history, we find that Hippocrates defined the technique of thoracic puncture for the treatment of lung abscess two thousand years ago, and to-day his principles remain unchanged.

It is not to be expected that the discussant of a paper from so eminent a gentleman as Professor Biggar shall accept unchallenged all his statements, even though they come from such a distinguished source. I gladly take issue with the announcement of an anatomical impossibility when of a possible bronchotomy he says that the position of the arm upward and forward will separate the *vertebræ* sufficiently to permit the resection of ribs, etc.

He taught me better anatomy than that more than twenty years

ago, and I know that back-bones do not grow limber with age to such an extent as to warrant this declaration unless based upon his own personal experience.

That position of the arm will widen the space between the inner border of the scapula and the vertebral column, and thus render the ribs more accessible, but the vertebræ will interlock as closely as ever.

Again, I question the location of pus in the case recited where it is said to have been found in Douglas's pouch. The pus was aspirated per vaginam, it is true, but that pus was extra-peritoneal or else his patient had established a most unheard of tolerance of pus in the peritoneal cavity. Pus has been known to separate the diaphragm and strip up the peritonæum and thus appear in the pelvis, but it would scarcely find its way *through* the peritonæum without setting up a most violent inflammation.

These papers emphasize what is to be done for empyema, what is to be done for gangrene of the lung, and what is not to be done for foreign bodies and gunshot wounds. The conclusions reached seem to me to call for hearty approval.

The empyemic cavity is an abscess from which sound surgical principles demand that we remove the pus; in which we are to limit and prevent the formation of pus; and to which we are to restore as far as possible the intra-thoracic pressure.

The principle which demands the amputation of a gangrenous area is novel only from the location of the field of operation.

In regard to the removal of foreign bodies, whilst statistics of more than a thousand cases show that non-interference has met with the best result, the truth seems to me to lie very close to the statement that every case both of foreign body and of gunshot wound is a unique case and its management will depend upon its own peculiarities.

Not every sinus indicates a thoracic cavity opening. Not every foreign body can be shaken out by the heels. Not every bullet is an instrument of death even though it takes up its residence in the very structure of the heart.

The behavior of Prof. Biggar's Case No. 3 contains a most valuable lesson on the subject of irrigation and we learn again, and how many times we have to relearn that nature is a most important factor in our work. She can be coaxed but not coerced—led but not driven. Irrigation and irritation are many times synonymous, and irritation in surgical work has many times meant death.

Thoracoplasty has been on trail for nearly fifteen years and as a surgical procedure has an established foundation. It does away with blind work with its uncertain results, and we should not be slow to learn that a stab in the dark even though done by a surgeon is sometimes as fatal as the thrust of the assassin.

The value of these papers to the profession lies in the emphasis they give to the worth of operative procedure in the treatment of disease. The practitioner accustomed to the management of cases purely from a therapeutic standpoint is quite apt to stop at the therapeutic limit and consider that all has been done when medicine has exhibited all its possibilities. Many a patient has been sacrificed to this point of view. Many a patient too has been sacrificed to surgical rashness, but when we consider the number of cases turned over to the knife as a last resort when they should have been presented for initial treatment, the therapeutic pot will hesitate long before it upbraids the blackness of the surgical kettle.

Has no one seen a pleuritic effusion pass over into the dangerous empyema, or seen a fatal peritonitis follow fast upon the heels of a temporized appendicitis? Has a strangulated hernia never called upon death to witness the defeat of a tardy operation demanded at the hands of a rash conservatism? Has the ruptured sac of an ectopic gestation never confronted the obstetrician while calmly consulting his patent calendar to see upon what day the bursting waters shall announce the time for him to remove his coat? If not then are these papers written in vain and our discussion of them is an untimely event.

Not all physicians can trap-door the thorax or the cranium, but it is of value to know that such work can be done and that sometimes even the patient shares in the triumph of the operator.

Sidney F. Wilcox, M.D., New York City: In attempting to discuss a paper like the one before us, giving as it does such a range of pathological conditions and showing such excellent results, one can but feel that the writer himself is the best fitted to judge as to the correctness of the methods and technique employed.

In reviewing one's own experience one is frequently struck with the fact that in a long series there has been a remarkable similarity in his cases; so that although a surgeon may have opened the thorax a good number of times, the opportunity for a variety of methods of operating has been limited. Unfortunately (or perhaps fortunately) this has been my experience; for nearly all of my cases of thoracic surgery have been those in which an accumulation of fluid, either serous or purulent has followed disease of the pleura. All of them have recovered, and with two exceptions all have been treated by making a slit between the ribs, introduction of a drainage-tube and irrigation, or simple aspiration has been employed to remove the fluid.

The good results have not been due to the fact that the cases have been simple and easy, but several of them have been desperate in character, as for instance the case of a little girl eight years of age. The amount of purulent effusion into the left pleura was enormous, so much so that there was a complete transposition of the thoracic

viscera to the right side of the chest. The child was so weak that an aspirator was first used to remove a portion of the pus as a temporary measure and 22 ounces were drawn off. A few days later it was found necessary to make permanent drainage and as the heart's action was so weak, and the breathing capacity so limited, it was deemed unsafe to use either chloroform or ether as an anæsthetic. Cocaine was then just becoming prominent as a local anæsthetic, and so a few drops of a five per cent. solution were injected over the site of the intended incision. The result was appalling, the child immediately went into a state of collapse and it was an hour before we could feel that she was in a safe condition.

When she had sufficiently recovered from the effects of the Cocaine, the ether spray was used as a local anæsthetic, a rapid slit was made along the seventh intercostal space and *three quarts* of pus evacuated at once without any distressing symptoms. A drainage-tube was introduced and the cavity washed out with a bichloride of Mercury solution, and the wound dressed antiseptically. The dressings were changed as frequently as they became saturated and the cavity only irrigated when a rise of temperature indicated a condition of sepsis. Then the bichloride solution was used.

The child made a perfect recovery, and examination over a year after revealed only the slightest difference in the two sides of the chest.

My other cases, which required incision, have been very similar, except that in this case the amount of pus removed was greater than in any other.

In one case, in a child, I was obliged to remove portions of two ribs on account of the impossibility of otherwise obtaining sufficient drainage; in one other case a portion of one rib was removed for abscess following an accident, and in a third case, what appeared to be a cystic tumor of the breast proved to be a cold abscess connected with a carious rib resulting from an undiscovered fracture.

Aspiration is of no use as a curative measure except where the fluid in the pleural sac is serous. Where pus is present it may be employed to gain time, as has been remarked in Dr. Biggar's paper, for diagnostic purposes.

Formerly my method was, after induction of anæsthesia, either general or local, to feel for the upper border of the rib, introduce the knife through the chest wall, and make a rapid slit along the intercostal space. This only requires a second, and has always been satisfactory; but in the last few cases, for fear that I might be surprised by a troublesome hæmorrhage, I have modified the technique, although it requires more time. First, an incision is made through the skin and subcutaneous tissue; next, the muscular tissue is cut through, keeping near to the upper border of the rib. This is done without hurrying, and all bleeding vessels are compressed and tied.

Then the point of a director is pushed through the remaining structures into the sac; the director is quickly withdrawn, and the blades of a uterine dilator introduced in its place, and the opening can be stretched to any extent desired without danger or fear of hæmorrhage. This operation is better adapted to cases where it is possible to induce general anæsthesia; where that is unsafe, and the ether spray has to be employed, the more rapid operation of slitting with the knife is preferable.

In recent cases of empyema I do not think, as a rule, it is necessary to resect the ribs. So far as my experience goes, the contour of the chest is better preserved without resection, and the lung seems to slowly expand and again fill the thoracic space as the cavity closes up. Various forms of drainage-tubes and methods of fastening them have been devised.

A very simple arrangement which I have employed has given perfect satisfaction. Take a short piece of stiff, soft rubber-tubing and pass two safety-pins through the walls on the opposite sides of the tube. These pins simply pass through the walls and do not encroach on the lumen of the tube. Then take two strips of rubber adhesive plaster and fasten one to the back wire of each safety-pin. Each strip of adhesive plaster should be long enough to go nearly half round the body. The tube is introduced into the wound, the two strips of adhesive plaster pulled in opposite directions and stuck to the skin.

This arrangement is made in a moment, costs almost nothing, and holds the tube firmly in place.

With regard to antiseptics, I have always used bichloride of mercury and have never had any trouble, but have only irrigated the cavity as often as the temperature indicated its necessity.

Dr. Biggar: I will not detain you but a moment. The paper was not concluded, as it was longer than I expected. I have enjoyed very much the paper by my new friend, Dr. Knoll. I want to say this in regard to Dr. Walton's criticism about the position of the scapula. He evidently misunderstands the paper, or else I have made some clerical errors, and I say this, that the paper, I think, reads, that the position of the arm will bring the scapula forward along a certain space, between the border and the vertebræ, so as to permit of the chance of the resection of the rib in bronchotomy. That was the intention of the paper, and no person supposed that the position of the arm—and I think that my good friend Walton does not absolutely mean it to himself, except as a little joke upon me—would displace the vertebral column. He knows better, but I always admire him whether he is *pro* or *con*.

Another point is this—and if the paper had been continued we would have come to that point—let your cavities alone. We have tried the medicated irrigation there, and irritants, and where we have

abandoned the irrigation and left it alone the formations have recuperated much better and much faster.

I must say this, that I was greatly pleased by the masterly effort of the paper which was read yesterday by my good friend, Professor Obetz. It was a masterly effort on a subject which is of great import to-day, more important, I think, than almost any other branch of surgery. My first introduction to this branch of surgery was about eight years ago, as I told you, in the Isle of Wight, at this consumptive hospital, which gave me the inspiration that there was a great deal in resection of the ribs for pulmonic diseases and for diseased conditions.

I never was so pleased in results as I was in one of the cases that I narrated of that little girl ten years of age who came with all the conditions of a lung completely destroyed—a lung which had been degenerated and which you could put your finger inside of. When, with the condition that existed in that little girl, with her spinal curvature and the contour of the chest showing four inches difference between the right and left sides—the left side being four inches smaller—when you can restore such a case to almost a normal respiration, with a greatly improved contour and complete apparent physical condition, you can understand that the joy which that poor little girl gave me was worth more than gold, and well repaid me for the time which I devoted to the study of thoracoplasty.

THE TREATMENT OF EPILEPSY, IDIOCY AND ALLIED DISORDERS BY CRANIAL EXCISION AND INCISION.

By G. F. Shears, M.D., Chicago, Ill.

At the annual meeting of the American Institute of Homœopathy, held in 1889, the Surgical Bureau took for its topic Brain Surgery, and presented exhaustive treatises covering almost every phase of this subject.

I do not intend, in this brief article, to compete with the report there submitted, but rather to supplement several divisions of the subject, by considering the present position of certain surgical procedures and by presenting some personal experience. In no other department of surgery, not excepting the surgery of the abdomen, have more new methods been introduced or more startling innovations than in brain surgery, and a large part of this history has been made within the last few years.

The time is so brief that much of the work done has not been recorded, and sufficient data is not at hand to determine its value or its attendant dangers. It is only by the trial and comparison of the results obtained that the true value can be determined. It is the duty, then, of every one to record his results, and thus contribute the more rapidly to a safe surgical practice; for surgical practice is the result of the consensus of surgical opinion rather than the practice of one man, as Nancrede aptly puts it. It is in this spirit that I review the disorders which have been selected as the subject of this paper, and append thereto some surgical cases. The disorders selected are epilepsy, cephalalgia, paralysis, insanity and microcephaly.

Epilepsy.—Removal of a portion of the cranium for traumatic epilepsy is not a new operation. In 1705 La Motte made, I believe, the first recorded operation. From that time, for almost one hundred years, the operation languished. Although made from time to time during the earlier part of the present century, it was not until

the advent of antiseptic surgery and the closer study of cerebral localization that it began to be generally employed. Even during this period the operation was confined to such cases of traumatic epilepsy as were accompanied by marked depression of the cranium and in which the history of a compound fracture was undoubted. Within the last four or five years the sphere of the operation has been extended, and operations have been made upon non-traumatic cases classed under the head of Jacksonian and focal epilepsy.

Some of the more venturesome have even advocated the use of the trephine in general epilepsy—if such a term may be employed. It is in *traumatic* cases in which a decided depression is present that the greatest number of operations have been made and in which the best opportunity for determining the value of an operation exists, yet medical opinion differs widely as to the ultimate result of the procedure. Dr. O. Laurient reports 102 cases of trephining for traumatic epilepsy: 54 per cent. cured, 17 per cent. unimproved, 20 per cent. improved, 2 per cent. worse, 7 per cent. died.

Agnew, in his review of work of Philadelphia surgeons—in which I see no notice is taken of the work of surgeons of the Homœopathic School—reports 54 cases, of which 32 experienced temporary benefit. 9 no relief, 4 passed out of observation, 4 were cured and 4 died. Briggs reports from Stephen Smith's table 92 American operations, with 63 cures; from Bartholomew Hospital reports 130 cases, 75 cures, and of his own, 30 cases, with 25 cures. Personally, I report the following cases:

Case I.—Young man, æt. 29 years; nine years before had been kicked by a horse in the forehead, sustaining a compound fracture; three years later he was badly scared; this was followed by convulsions, which gradually ceased; four years later convulsions returned, and at the time of the examination had continued two years, occurring regularly two or three times a week. The depression was found in the left frontal region beginning two inches above the supraorbital ridge and extending two and a half inches upward toward the median line. The entire depressed bone was removed. It was closely adherent to the superior longitudinal sinus, and was dissected off with the knife. During the operation the sinus was punctured, and for a time the hæmorrhage was profuse. It was controlled by sponge pressure, and eventually by suturing with catgut. Convulsions ceased after the operation, and did not return for six months.

At the end of that time he began drinking heavily, and the convulsions returned. Upon stopping the use of alcohol they ceased.

Case II.—Man, æt. 42 years. Five years previous was struck by a locomotive, sustaining a fracture of the right parietal bone; also severe injuries and possibly fracture at some other point of the cranium. The patient remained in a comatose condition for three weeks, and did not fully recover consciousness for six weeks. All previous knowledge was obliterated. Three years after the injury he began having convulsions two or three times a week. The spasms were ushered in by the patient turning to the right; then the head turned toward the right, followed by contractions of the right forefinger and thumb; then the arm, face, and leg. An irregular depression was found on the right side about two inches above the ear. Some question arose as to the best locality to trephine. Although the depression was found on the right side, the symptoms seemed to indicate an irritation of the left motor tract. The history was of little assistance. For some time after the injury the patient was in such a critical state that he was expected to die every moment, and a careful examination was not made. Severe contusions were found all over the head, any one of which might have been accompanied by a fracture. It was therefore decided to make the operation over the depressed bone. The entire area was removed. The dura was much thickened and inflamed. The patient did well for a few weeks, having no convulsions. Subsequently they returned in full force.

Case III.—Young man, æt. 30 years. Three years before was struck on the head with a hammer; wound never healed completely, a fistulous opening remaining. Two years after the injury convulsions began, and continued until the present time. They occur two or three times a month, the patient remaining unconscious for half an hour after each one. The frontal bone was uncovered and a small fistulous tract was found under it. The trephine was applied at its upper portion, and a small sequestrum and pus sac found on its under surface, both outside the dura. They were removed. No convulsions occurred for one year, when the patient was lost sight of.

Case IV.—Man, æt. 39 years. Kicked by a horse in the left frontal region, producing a compound linear fracture; the patient never lost consciousness; the wound healed promptly. Three weeks

later had a convulsion, followed in two weeks by another. Trephining was performed over the seat of injury. The bone was not depressed, but a thin blood clot was found between the skull and the dura. This was removed. The patient made a prompt recovery. No convulsions have since occurred.

CASE V.—Man, æt. 46 years. Fifteen years ago a trap-door fell on him, striking his head a little to the left of the median line, producing a contusion of the left parietal bone. The skin was not broken. The spot has remained sensitive and the skull seems more prominent at this point. Five years ago he began to have a twitching of the right arm. He loses consciousness but does not fall. The sensitive part was exposed and the one-inch trephine employed. The bone was found to be very hard and much thickened. No diplœ existed. No depression was discernible, and the membranes seemed normal. The patient recovered, and was free from the convulsions when last heard from, three months after the operation.

Jacksonian Epilepsy.—In this form of epilepsy the convulsions are confined to a single group of muscles, and are not accompanied by loss of consciousness. Whether the cause is largely traumatic or idiopathic is not known; that some cases are due to cerebral traumatism seems certain, but that others have no such history seems equally positive. The limited muscular involvement indicates that the brain lesion is of limited extent. Our study of brain localization enables us to locate the centres involved. Very naturally the thought arises, that if the irritant in the shape of a scar or in non-traumatic cases the irritable centre were removed, the spasm might be prevented. The plan has been carried into execution, but while the theory is simple, and, upon first thought, it would seem the plan should be followed by good results, there are certain reasons why the prospect of a cure by operation in this form of epilepsy is not encouraging. In those cases in which no lesion is apparent, our present knowledge is not sufficient to locate the real cause of the trouble. Even if we locate approximately the discharging centre according to the rules of cerebral localization and by means of the electrode applied to the cortex of the brain determine the exact centre of discharge, we have no assurance that the irritation which causes the discharge is in the centre itself, and that its removal will remove the irritation. In those cases in which a real lesion exists, as shown by cicatricial tissue,

the removal of the same might be followed by relief. Even in these cases the healing is necessarily followed by a scar, which in all probability will give rise to the same irritation as before. That many more cases are due to traumatism than is generally admitted, I have no doubt. In this connection, an interesting article by Dr. Ira Van Gièson, showing the changes that had taken place in the brain, as proven by the microscope in the case of a patient who had had epilepsy as the result of a skull injury, but in which there was no fracture of the inner table, could not but make me consider how many opportunities there are for brain traumatism in the injuries of childhood, even where fracture does not occur, and that possibly many cases usually considered as idiopathic may be in truth traumatic. In seventeen cases of Jacksonian epilepsy which I have collected in my reading, only three are reported as cured. Two of them were from traumatic causes, and were only a short time under observation. The mortality was large, about 47 per cent. My own experience is limited to the following case, in which a complete operation was not made:

Girl, æt. 17 years; convulsions occur two or three times a week, commencing in the hand and then extending to the neck, ending with a wagging motion of the jaw. No history of fracture of the cranium could be elicited and no scar could be found upon the scalp. The mother remembered, however, that the girl had fallen down stairs six or seven years before and had complained for a long time of a pain in her head. Believing that a more severe injury had taken place than was at first supposed, and with the determination that if any visible lesion existed that the discharging centre should be removed, an operation was advised. The symptoms indicated the irritable centre to be the middle third of the ascending frontal convolution, and accordingly the trephine was placed a little in front of the middle third of the fissure of Rolando, the method employed to determine this line being that recommended by Professor Chiene. Although the dura was incised and the brain carefully examined, no scar nor inflammatory patch could be found. The removal of brain substance was therefore abandoned, and the wound closed in the usual manner. To my delight the patient had no more convulsions while under my charge, some three weeks. Whether this result was due to shock, relief of intracranial pressure, or the removal of some irritable point in the skull, I do not know.

Cephalalgia.—The results of operations undertaken for this disorder, when due to traumatic causes, are very encouraging, both as regards benefits derived and the slight mortality of the operation, if we may depend upon the reports made in our medical literature. Of some twenty cases which I have noticed in my reading, relief was obtained in all, even in those in which no appreciable lesion could be found. How permanent the result could not be determined. The following case published some time ago in the *Clinique* is the only patient upon whom I have made the operation.

A young man, æt. 23 years, was struck on the head with a stick, sustaining a scalp would. For twelve weeks was never in full possession of his faculties; was violent, and for six weeks in an insane asylum. A discharge of pus relieved the insanity (*Clinique*, vol. xiii., p. 518), but headache remains; cannot focus the eyes; is unable to follow his business. The cicatrical tissue was excised from the scalp with the hope that this would relieve the irritation, but no relief was obtained. The scalp is sensitive for some distance around the scar. The scar was excised and the periosteum underneath it, which was adherent, also excised and a button of bone removed from the sensitive area. No thickening of the bone or lesion of the dura was discovered, and yet a perfect cure followed. In a somewhat similar case reported by me in the *Clinique*, but not reported under this head because there was no operation made upon the bone, the headache was relieved by the removal of the scar, but in the above case the removal of the scar alone failed to affect a cure.

Insanity.—Excision of bone or trephining for insanity is an operation which has rarely been done. That such an operation is warranted when the insanity follows a depressed fracture rests upon the same basis as that of the operation for epilepsy, yet although the number of cases of insanity following fracture is considerable, I was surprised to find that few cases of operation for the relief of insanity are on record. Prof. Briggs reports two cases, one of which died, and the other improved. Dr. Boyd reports one case with no improvement, and two other cases reported in journals were quoted as not improved. The most favorable cases are those in which depression is present and some symptoms indicating local pressure are prominent. My only operation for this trouble is recorded in the following case:

Young man, æt. 22 years; four years previous was kicked by an

unshod horse, cutting a gash about two inches long nearly transversely across the posterior portion of the right parietal bone. It was not determined at the time whether the bone was fractured. The patient was unconscious for four hours after the accident. Three months later the first symptoms of insanity were noticed. He would mutter and gesticulate while at work, and when unemployed was restless and irritable. For some time previous to his being brought under my care he had been violently insane. No appreciable indentation of the skull could be found. The seat of injury was uncovered by a horseshoe-shaped incision, the old cicatrice excised and a button of bone removed from the cranium just under the scalp wound. No indentation of the internal plate was noticed. The dura seemed normal and upon opening it and examining the cortex no injury could be detected. The patient made a good recovery, but the only benefit was an increased tractability and a lessened violence. This condition remained three months after the operation.

Paralysis.—Local paralysis following injury to the skull has been treated by excision of the depressed bone, although the number of such cases recorded are very few. In general paralysis operative treatment has been believed to be of no service. Rey argues that in the early period of general paralysis the intense congestion increases the volume of the brain as well as diminishes the endocranial cavity by thickening bone. The removal of the resulting compression by an opening at some point may set aside some of the general phenomena, but in confirmed cases surgical interference would be powerless to hinder the change due to chronic meningic encephalitis. The following case was operated upon by me December 19, 1892:

Man, æt. 41; fifteen months previous was struck on the right parietal bone with an axe. The exact extent of the injury was unknown. Eight months later he began to feel a numbness in the left arm and leg accompanied by some impairment of motion. This increased rapidly until in a short time he was confined to his bed. He lost the power of speech, control of the urine and fæces. About three months before I saw him the right leg and arm commenced to jerk. Professor Fellows saw him in consultation with his physician and saw no hope of benefit, unless it might result from operative interference. When seen by me the left side was paralyzed, the arm completely, the leg partially; the right arm and leg were in a state

of contraction. The head and body inclined to the right side, swallowing difficult, eyes unaffected, conscious but could not speak. The progress of symptoms indicated to my mind a lesion in the right motor area extending over into the left, presumably meningis-encephalitis. The lesion seemed so extensive that an operation was not advised, but the friends were so anxious that some effort should be made, that with the hope that pathological changes might be limited to the right side and the symptoms of left side involvement might be due to sympathy, an operation was attempted, a large button was removed from the upper portion of the right motor tract and the dura found to be very much thickened and so full of bloodvessels that for a time it was supposed a new growth was present. The opening was rapidly enlarged with the cutting forceps and a large area exposed extending over the median line. The inflamed dura extended over into the left motor tract. The dura was incised and the cortex examined. The pia mater, while not adherent, was inflamed and the cortex of the brain had a yellowish hue. While separating the inflamed dura from the cranium a large vein close to its entrance into the superior longitudinal sinus was opened and hæmorrhage was profuse. It was controlled by pressure and subsequently by ligation. The patient never fully recovered from the shock of the operation and died twenty-four hours later.

Microcephaly.—One of the most unpromising conditions which has recently been attacked by the surgeon is that known as microcephalic idiocy. It is believed that a certain number of cases of idiocy may be due to the pressure of a prematurely ossified cranium. In these cases Lannelongue proposed and has practiced the excision of a groove in the skull in order to permit of brain expansion. He reports twenty-five cases, one case died; most of the remaining showed marked improvement. My own experience is confined to the following case:

Girl, æt. 6 years, idiotic, cannot walk; moves a few steps and falls; cannot stand still without support. Has no control over the urine or fæces; cannot talk or make known her wants except by screaming; eyes convergent. Has no decided convulsions but at times very restless and excited. Head is irregular in shape and noticeable for its lack of frontal development. No cause could be assigned by the parents. At birth labor was normal except that it was a footling instead of a cephalic presentation. Do not know whether

the fontanelles closed early or not. Following the plan suggested by Lannelongue a section of bone three-eighths of an inch wide and extending in a curvilinear line from a little to the left of the occipital eminence to a point a little below the frontal eminence, was excised. By this means a long flap, U-shaped, with the base below was formed over the whole motor tract. The wound healed promptly and the child showed signs of improvement. Three months after she had control of urine and fæces, was able to walk and use three words. More than this could hardly be expected in so short a time.

A review of my own work shows five cases of traumatic epilepsy, with four successes and one failure; one case of Jacksonian epilepsy, with one success; one case of cephalalgia, with complete relief of the symptoms; one case of insanity, not improved; one case of paralysis, with one death, and one case of microcephalus, with decided improvement. In the fatal case the result was due to the shock of operation during the active progress of encephalitis, and in estimating the dangers of operative interference in non-inflammatory cases, such as epilepsy, cephalalgia and microcephaly, ought not to be taken into consideration. In the other cases no evidence of a serious operation having been made was evinced. In every instance the wound healed with suppuration, the patients were up at the end of one week, and often discharged at the end of two; indeed, I know of no operation in which so rapid recovery takes place, and I am inclined to believe with Dr. Roberts, who expressed himself some time ago before the American Surgical Association to the effect that the operation of trephining added no more risk than the amputation of a finger.

A consideration of my own cases and a careful reading of the results obtained by others lead me to several conclusions.

1. That after a careful removal of all other exciting causes that may produce epilepsy, cephalalgia, paralysis or insanity—especially when a history of cranial injury is obtained—the surgeon is in duty bound to attempt the removal of this possible exciting cause.

2. That there is a good probability of success attending his efforts in traumatic epilepsy, cephalalgia and localized paralysis, and, in lesser degrees, in insanity. In this connection it must be remembered that in the production of these brain disorders there are two conditions present—an acquired or hereditary abnormal excitability

of the reflex centres and a peripheral irritation from depressed bone, inflamed dura, clot or scar. The removal of the exciting cause leaves still the acquired abnormal excitability of the reflex centres, and some other irritation may occasionally reproduce the convulsion. Again, the habit once acquired becomes in a degree independent of the original lesion. For this reason one must not be discouraged or determine the operation a failure if convulsions do not immediately cease. The anatomical cause may be removed, but therapeutic measures are still necessary to remove the tendency. Many cases given up as failures might have been classed as successes if careful treatment had followed the operative procedure. The earlier, then, the operation, the less the probability of an acquired habit and the greater the prospect of success.

3. That the operation for microcephalic idiocy is still an experiment, but one that, considering the deplorable condition of the patient and the little risk undertaken, warrants further trial. Although possibly not a logical conclusion from the consideration of the treatment of epilepsy, idiocy and allied disorders as outlined in the cases reported, I have been deeply impressed with the fact that so many cases report an imperfect examination of the original cranial injury, or so timid a treatment of a serious injury, and I feel warranted in advising, in the interest of primitive measures, a bolder treatment of cranial injuries. It may have been wisest before the time of antiseptic surgery to treat all cases, except those showing evidence of compression, by conservative measures; but with our present methods, and basing my conclusions on the excellent results that have followed this plan of treatment in my own practice, I feel it my duty to urge thorough examination and trephining in all cases of fracture of the cranium attended with depression, and in all compound fractures, whether accompanied by depression or not. It may not be inappropriate to add a few words regarding the technique of the operation. It is my custom to shave the entire scalp, scrub it with soap and water, wash the skin with ether, then bathe with a 1–2000 solution of bichloride of mercury, and apply a skull-cap of gauze wet in the solution and covered with gutta-percha tissue. This is done twenty-four hours before the operation, and the dressing left until the moment of operating. I invariably use chloroform, unless contraindicated by some trouble, as an anæsthetic, as there is, I believe, less venous congestion and less hæmorrhage. The opening is made with

the trephine, and subsequently enlarged with the cutting forceps or chisel. If upon the removal of the bone, the brain pulsates naturally and the dura appears normal, the latter is not incised. If, however, the dura is inflamed, if pulsations are absent, or if there is no cranial lesion to account for the trouble, the dura is incised about a quarter of an inch from the bony boundary and the brain examined. Until the excising of the dura the bichloride solution is used. Upon exposing the brain, boiled water only is used. I have, however, used the 1–2000 solution in accident cases in which the brain substance was exposed, with no bad effects. Before closing the scalp the dura is united by catgut sutures and rubber drainage-tubes placed between the dura and the scalp. If there is any tension from the excision of the scalp scar, the scalp is united by silver wire sutures rather than with catgut. A simple dressing of iodoform and sterilized gauze is employed; no ice cups or lotions are applied. The wound is dressed in twenty-four hours, and not again until the seventh day. I do not replace the bone discs or chips, believing that we desire to remove all possible sources of irritation.

Discussion.

DeWitt G. Wilcox M.D., was called upon by the chairman to discuss Dr. Shear's paper, and responded as follows: *Mr. President, Ladies and Gentlemen:* I have listened to this paper with much pleasure and pride—the pleasure because it has been so interesting and instructive, and pride because such excellent results have been attained by a member of the school which is accused of knowing little of surgery.

One statement that was made early in the reading of the paper I most heartily endorse; that it is the duty of every surgeon to record carefully his operations, with their results. I believe it the duty of every surgeon, and indeed of all surgical practitioners, to keep a record of all cases. What we need in our surgical literature of to-day is an accumulation of records, with their results; and it seems to me that one of the most childish mistakes that the physicians of the Old School make in their records, such as the annual, and the year book is the omission of these operations performed by Homœopathic surgeons. Or, perhaps if they do mention them, it is in some such way as that in which a recent author alludes to them in his work. He says: "Strange results of this operation have been brought to a culmination by a Homœopathic practitioner," referring to our Van Lennep, and he goes on further to say that though found in curious company yet the paper bears evidence of credibility and

knowledge. Such idiocy seems to me to bear evidence of a microcephalic condition that calls certainly for the surgeon's knife.

This operation is not one of technique, but of pathological knowledge. In the early days of abdominal surgery the question hinged largely upon the manner of doing it. If a tumor existed, either the tumor was removed or it was not removed. Were it removed successfully, the patient recovered, if unsuccessfully, likely he did not. There are two conditions to be considered in the discussion of this question. First, have we made any advances in the discovery of the first causes of epilepsy, and second, what do the practical results of operations show as to whether any advances have been made. We need only to refer to our text-books of not later than ten years ago; for there we find almost universal mention made of the cause of irritation being in the spinal cord or in the deeper structures of the brain. Although we have not learned all that is to be learned about epilepsy, yet regarding its cause there is much we do know with tolerable certainty. Now by this operation are we going to lessen the frequency of the seizures of epilepsy? Are we going to increase and bring intelligence in idiocy? As I say, we must not pass one of these questions.

When it comes down to a practical consideration of the question as resolved and obtained from operations, again we must come back to the record. Having gone carefully over the record we have been able to obtain, I think, that we have the greatest reason for encouragement regarding this operation, that it is practical and it is going to become more so. Dr. Shears has referred you to the record of Agnew, wherein he mentions fifty-four cases with an improvement of thirty-two, and a cure of four. It seems to me that that was a good result in a condition which heretofore has been regarded as almost absolutely hopeless, where even four out of that number have been absolutely cured and at least thirty-two have been improved. The valuable additional chapter that Dr. Shears has given us will add greatly to our encouragement in this respect. He has shown, by the records of most of the cases, that the best results are to be obtained from those of a traumatic history, for even there, I think that we will have more encouragement, notwithstanding we find a strong history of heredity attached. If that be the case there may yet be a history of traumatism that will give us some encouragement for an operation. We do know this, that a patient who has a strong cancerous history may receive an injury or a sudden irritation which will result in a cancer which in a person not so inclined will have no effect whatsoever. In these cases if there be an epileptic tendency in the family and an injury however slight to the brain is occasioned, it will very likely result in epilepsy. I think that we should not regard a case as absolutely hopeless, even though there may be this hereditary history of epilepsy.

Another encouraging feature the doctor has brought out in the recital of his cases is that a number of the cases have been improved, even though they are beyond the period of childhood. It has been generally considered that very little is to be expected in these cases of insanity, and particularly of epilepsy, if the operation be undertaken in adult life. That, I say, is reason for further encouragement, because all of his cases were beyond the period of childhood and yet there was a decided improvement.

So little has been written on the subject of cephalalgia that any case in the way of it is received as an eye-opener and an encouragement for the future. Baker, in his annual report of 1892, says: "In the present light of surgical knowledge we need expect nothing in the treatment of insanity from surgical means." It seems to me that a man must be a good deal of a medical pessimist who would make such a statement regarding any complication in the present light of surgical progress. Dr. Shears's one case shows that there can be some improvement made in this most discouraging disease. In the condition of microcephalic idiocy, as he has reported, there are twenty-five cases with only one death. This is certainly encouraging to an extreme, in a condition which we have regarded heretofore as absolutely hopeless for there has been no attempt whatsoever, in these conditions of idiocy, to secure improvement by any operation; and now that the surgeon's knife has attacked this disease, it seems to me that from the recital of these twenty-five cases, and the additional cases of Dr. Shears's as presented in his paper, that they also justify a feeling of very great encouragement.

CLARENCE BARTLETT, M.D.: The privilege of aiding the discussion on the address by Dr. Shears is to me a most pleasant one, being, as I am, in close accord with the conclusions he adopts. Although not a surgeon the treatment of epilepsy, both medical and surgical, has for some years past been to me a most interesting as well as very unsatisfactory one. A rapidly increasing experience (during the year past over 75 cases) makes me very conservative in stating whether or not a given case has been cured. I cannot say exactly how many cases of epilepsy have been operated upon by my advice. I can say, however, that all so far as I know received more or less temporary benefit from the same. In some instances, the seizures ceased at once, while in others a number of convulsions occurred for the few days succeeding the operation, when they disappeared. The permanent results from these operations are, on the other hand, far from satisfactory. In the majority of cases, seizures recur at intervals ranging from two or three months to as many years. I believe with Seguin that no case of epilepsy can be regarded as cured by an operation until the patient had passed through a period of two years without any attacks whatever.

These remarks apply with equal force to the surgical treatment of

traumatic epilepsy. It is the generally accepted idea among the profession that trephining in traumatic epilepsy is tantamount to cure. This is an error. A clinical study of these cases shows that almost invariably the epilepsy does not develop for months or years after the injury. In other words there develops within the cranial cavity a something that did not exist shortly after the accident, a something that is the actual cause of the so-called traumatic epilepsy. I believe with Sachs that secondary changes in the brain substance take place, and thus occasion the epilepsy. Under such circumstances it is almost the height of absurdity to expect a cure from any operation. Especially is a cure improbable in those cases, and these in my experience are the majority, in which the convulsions are general. If on the other hand, the convulsions are localized, and the seat of the cerebral lesion is evidently beneath or in the vicinity of a depressed fracture, I should most certainly look for a good result.

A review of Dr. Shears's cases of epilepsy treated surgically bears out the views I have expressed. In Case I., there was a return of the convulsions following a debauch. In the majority of cases it will be found that the first convulsion attending a relapse has an exciting cause. In Case II. there was temporary improvement when the convulsions returned in full force. In Case III. there was a very material cause for the convulsive seizures in the abscess which was so successfully evacuated. Here I believe a permanent cure is to looked for. In Case IV. there was an extra-dural hæmorrhage, the proper treatment of which led to a cure. Both cases (III. and IV.) should not to my mind have been included as cases of epilepsy, to which disease they bear but little resemblance. In Case V. the ultimate result must remain in doubt because sufficient time since the operation has not yet elapsed.

The failure to cure traumatic epilepsy by surgical means is rightly attributed by the essayist to the generation of the epileptic habit. I have already reverted to another reason, the occurrence of organic cerebral changes, and I would now mention a third, the failure on the part of the profession to give these cases proper medical and hygienic treatment, they expecting that the operation will act unaided.

It may seem to my hearers that I am decidedly iconoclastic in my sentiments. I have reason to be. I have seen case after case remain free from convulsions for months, and then relapse into its former deplorable condition. In May, 1890, I reported a case of dural epilepsy, in which the improvement was little short of marvellous, and I and my associated surgeon gloried in a wonderful cure. Just thirteen days ago I learned from a New York neurologist that this identical case had turned up in his clinic, and was now as bad as before.

At the present time I have in mind the case of a child but three years old, a sufferer from epileptic seizures, fourteen or fifteen occurring each day. They were of local commencement. Trephining over the appropriate motor area was performed by Dr. W. B. Van Lennep, with the expectation of excising the same should it be found diseased. It was found to be healthy. Several convulsions occurred during the few days succeeding the operation, since which time the child has been entirely free from them.

Again, a case was admitted to the Hahnemann Hospital for study. The actual number of seizures per day being over sixty, if the statements of her father can be accepted. The child was put on an exclusive milk diet, and for several weeks had no attack of any kind. Then she relapsed, though not as bad as before her admission to the institution. Then she was seized with measles, during the course of which she had numerous convulsions. After convalescence, the fits remained away until her discharge from the hospital, four weeks later. Concerning her subsequent career, I am in ignorance.

The temporary improvement in epilepsies by trephining I attribute to two causes. The first of these, and by far the most active one, is the effect of operation *per se*. Although this subject has been formally introduced to the profession within a few years, its importance has been recognized for a number of years. It matters not what the operation be; it may even be a severe traumatism, a fracture, or a burn, or a contusion, and the fits are temporarily suspended thereby. One of our Cincinnati physicians has proposed to take advantage of this fact in the treatment of epilepsy. Even intercurrent diseases, measles, as in the case just reported, may act as very efficient anti-epileptic remedies. A second cause for the improvement is the relief of intracranial tension. In the majority of cases I have seen operated, the membranes have been abnormally tense.

The magnificent results reported by Laurento, as quoted by Dr. Shears, namely, 54 per cent. cured, I can only account for by reason of insufficient observation. This is a crying evil in the surgical literature of epilepsy. Standard critical journals, as the *British Medical* and the *Lancet*, contain the reports of many cures, which in reality are not cures, for they often are reported even before the wound of the operation has healed.

The excision of cortical centres for the cure of Jacksonian epilepsy has borne some good fruit in the shape of amelioration, but the cures are in the minority. In all of my cases relapse has occurred. Many of these cases have as their origin the so-called spastic hemiplegia of epilepsy, the pathological conditions at the foundation of which are ot a varied as well as of a most serious character. It is hard to expect a cure under such circumstances.

The question of the removal of irritable cicatrices has been raised

by Dr. Shears. I think it very wise indeed to remove any such source of irritation; at the same time I must warn against too ready an acceptance of the idea that a cure will certainly result. In my case of dural epilepsy a very irritable cicatrix existed, and this was removed.

The surgical treatment of insanity is worthy of close study. Temporary improvement in cases of general paralysis of the insane has been effected by a few English operators.

The cases subsequently relapsed. It has been urged by some that these reports teach nothing, for the course of general paralysis of the insane is remarkable for the spontaneous improvements which may ensue. Numerous insanities have been known to recover under the influence of a severe traumatism. Trephining may act curatively and is a wise measure, substituting a scientifically performed for an accidental and bungling traumatism.

The surgical treatment of abscess of the brain admits of no discussion. If pus exists in the brain, it must be removed, or the patient will die. Our course must be guided by the reliability of our diagnosis.

Dr. Shears, in closing his paper, makes a very important point, so important, indeed, that I desire to emphasize it as much as may be in my power to do. He pleads for an early and efficient treatment of cranial injuries. For years the profession has been guided by a doctrine that I regard as decidedly antiquated, if not actually inhuman, that of concussion of the brain. It has been customary, whenever cerebral symptoms persisted for any length of time and there is no external evidence of bone injury, to attribute the trouble to cerebral concussion. No more dangerous theory exists in medicine today, making, as it does, the surgeon inefficient by reason of masterly inactivity. In the vast majority of such cases, proper methods will show that fracture, intra-cranial hæmorrhage, meningitis, or other gross lesions exist. So far as relying upon a depressed fracture, I believe in almost invariably making an exploratory incision; if a fracture is discovered, then trephine, whether there be a depression or not. Many times small extra-dural hæmorrhages will be discovered, the removal of which is unquestionably good surgery. Such cases make far more rapid recoveries than do the head injuries in which operation is refused. I have in care at the present time two of the latter class: one a case in which the location of the lesion is undoubted, and which has pursued a very slow course; the other a basal fracture, which has improved, though after a tedious convalescence. In both instances permanent mental changes will probably ensue.

My colleague, Dr. Van Lennep and myself have been working on this line, the radical treatment of head injuries, for some time past. The results thus far have been all that the most fastidious

could desire. Every case of head injury is examined from a twofold standpoint, that of the neurologist and the surgeon. Many cases that would have died under a conservative or expectant (more properly speaking) treatment, have made most satisfactory recovery. In the early, in the thorough primary treatment of head injuries, lies the proper treatment of traumatic epilepsy, *i.e.*, its prevention.

While speaking thus pessimistically concerning the results from the surgical treatment of epilepsy, I still advise operation in a selected few cases. All traumatic cases with localized seizures should be operated. No case should be treated surgically unless there is an indication for such treatment. In every instance the patient and his friends should be made to distinctly understand that the operation must be supplemented by proper hygienic and medicinal measures. This, I am sorry to say, is rarely done; indeed, it is well-nigh impossible to impress its importance on the lay mind.

As to microcephalus and craniectomy, it is yet too early to speak positively. The operation is a serious one, more serious the longer the time occupied in its performance. Successful ultimate results can only be expected when the operation is supplemented by proper educational methods. The bulk of the evidence at present at our disposal goes to show that but little will result, although in the last case in which I was associated there was apparently considerable improvement during the patient's stay in the hospital. Cases selected for operation should be individualized most carefully. There should be no doubt concerning the smallness of the head and the closure of the sutures, and the patient should be reasonably young. In none of the cases in which I have been associated has the patient been more than five years of age.

If in these remarks I have painted the results in too sombre hue, it is not because I believe there is no future for cerebral surgery, but rather to check a reckless enthusiasm. I sincerely trust that I have induced my hearers to favor early efficient treatment of recent injuries, while they spare their enthusiasm in the treatment of the old ones.

W. F. Knoll, M.D.: In the last few years I have made brain surgery quite a study, and I have now quite a number of cases which I could report if I had them properly tabulated. But I want to say that I am very thankful to Dr. Shears for what he has said in regard to operations upon the brain. There has been a complete change in the ideas of neurologists, and what a while ago was considered to be an uncontrollable irritation has to-day a reasonable and scientific explanation, and that which has given us this reasonable and scientific explanation is surgery. The experiments which have been made by the vivisectionists and the results which have come from their past examinations have laid the foundation for practical surgical investigation and operations, and to-day we have enough cases tabulated of

nervous diseases to show that the brain, in a large number of cases, is the seat of disease, and that it can be reached successfully by the knife. Now there is no doubt whatever that a large per cent. of the cases of epilepsy are purely traumatic in nature, in their origin; indeed, the largest part of them. We rarely ever find a case of epilepsy which, when followed from first to last, has not a traumatic history in it somewhere. A large per cent. of the cases of microcephalic disturbances also have traumatism as a starting-point. It is either traumatism received during birth, or it is traumatism received after birth. A large per cent. of the cases that we have of cephalalgia are the result of traumatism, and I believe that those cases, in time, will be attainable, and we will have such reliable cases to go by that a diagnosis can be made in the majority of them, and in the cases that are of a surgical nature surgical means will be applied successfully.

One point especially that I wish to speak about is in regard to the different methods of operating and of removing the bone from the skull—the ease with which it can be done and the safety with which an operation can be made. I have here some instruments, a description of which has appeared in print, for removing the skull-bone after a primary opening has been made through the skull with a chisel and hammer. I have brought these instruments with me this evening so that I can show you how easily an examination can be made.

(Dr. Knoll then illustrated the use of the instruments to the audience in detail and answered several questions put to him by various members of the Congress, concluding his remarks with the statement that he did not believe in trephining.)

Dr. Shears: I have nothing to take back that I have said, and I don't know that I have anything to say that is very different from what has been said. Dr. Knoll and I will never agree upon the subject of trephining and the chisel. We have had that out before; that is, to our own satisfaction. We have trotted it out for society meetings, and the Doctor has trotted it out again upon this occasion. Now I want to say that, notwithstanding the statement that the Doctor has made, I believe the trephine is a much more useful instrument, and a safer instrument, and a more rapidly-working instrument than is the chisel, and I believe also in the hands of others, possibly in those who are not so skillful. There is no need whatever of cutting the dura when you are using the trephine, if you use it properly. There is not that jar to the brain that there is when the chisel and hammer are used. Now I know it is a German fad to use the chisel and the hammer, and I have seen it used and tried it, and I can make a hole through the skull with some celerity, but I don't propose to use it, and I am not going to recommend it to anybody else.

So far as removing the bone is concerned, of course we all use these cutting forceps in various forms and shapes, yet I assure you, that when you have your patient down upon the table and are not able to get the bone up in a position where you can get your forceps on it, that it does not get out with that same ease that it does here.

Now that is not a criticism on Dr. Knoll. He gets it out easily and readily and rapidly, but I use the trephine first, and that is a very nice little instrument. I think, however, that in a large number of instances you want a larger groove than that cut in this instrument.

I had hoped that something might be said here concerning preventive measures in the treatment of epilepsy resulting from traumatic causes. My paper, which was not concluded, had something to say about the preventive measures. I am inclined to advise very radical measures in the treatment of fractures of the cranium, and I believe if more radical measures were instituted there would be fewer cases of epilepsy, fewer cases of insanity, etc., for if every case of compound depressed fracture was trephined, if every case of fracture of the cranium was trephined, especially when it was not compound, whether there was depression or not, there would be fewer cases of insanity. I don't know that I should advise every case to be trephined, but I certainly should advise all compound cases, whether there were symptoms of compression present or not.

A REPORT ON ORIFICIAL SURGERY, INCLUDING AN ANALYSIS OF 1000 *CASES.*

By E. H. Pratt, M.D., Chicago, Ill.

The preceding generations of medical men, in their struggles with pathological conditions, have almost invariably attacked them at the points of manifestations. The testimony of the body itself has been taken as authentic, and its points of discomfort, wherever located, have been considered the proper places for the application of remedial measures. If the head ached, the head was carefully examined, and the story which the head had to tell for itself was patiently listened to and considered and remedial measures, internal or external, were directed headward. The same is true of the heart, lungs, liver, stomach, and other organs.

The coming generations of doctors will do better work, because they comprehend more clearly not only the nature of pathology, but also its underlying principles. Our predecessors have struggled merely with effects; our successors will manipulate causes. In the past much suffering has been relieved; in the future relief will be more general and sure, and, at the same time, the age of prevention will be ushered in.

There is now a class of scientific workers which, by dissections and the aid of the microscope, is seeking to solve the riddles of disease on the theory of physical causation. There is also another class of workers which, by an opposite process, preferring telescopes to microscopes, synthesis to analysis, is scanning the realms of force for an explanation of matter. The analysts have discovered, classified, and are seeking to annihilate the hordes of microbes which swarm all air, and water, and food, and which await upon the decay of the body as birds of prey hover about a carcass, premeditating and accomplishing its annihilation. The synthesists are hunting for a God and the laws by which the judgments of life and death are prescribed.

The first class of students, in searching for causes of disease have

stumbled upon some wonderful effects of disorganization. The other class of students, in contemplating morbid conditions have accidentally discovered that the manifestations of disease, which for so long a time have been regarded as causes, are really nothing but effects, and that the causes of all disease lie in deeply hidden principles which hitherto have been unobserved. Both classes of students have served humanity well, for the one has established cleanliness, and the other has ushered in godliness; and with these two advances in medical practice the future is made big with hope that the coming generations of men may be enabled to escape the pests and plagues of their ancestors and enjoy the unalloyed happiness of healthful lives.

The orificial philosophy, the subject of the present report, is a product of synthetic thought and observation. Its principles are applicable in all forms of chronic ailments. The testimony of the microscope, of the stethoscope, of percussion, of the clinical thermometer, of chemical analysis, and of all forms for diagnosing conditions, are necessary as furnishing items for a general inventory of the case. But it matters not what organs or tissues of the human body may be ill-conditioned, what functions may be disturbed, what local or general bodily discords may prevail, the possibility of their existence is explained upon a basis of one common predisposing cause. The orificial philosophy does not consider questions of inherited or acquired tendencies, of smouldering poisons and blood taints; it simply furnishes an explanation for the manifestations for these as well as for all other possible forms of pathology, and suggests a remedy.

The essential questions in any case of sickness are: Is the whole body or any part of it chronically diseased? Have other remedial measures proved ineffectual? Is the reactive power of the system so poor that it permits lingering illness in spite of all efforts at relief? Is the case, in other words, one of the so-called incurable forms of disease? If so, then there must necessarily exist (1) blood stasis or congestion; (2) weakened peristaltic action; (3) wasted sympathetic nerve power. Always, and without exception under such circumstances, upon examination will there be found pathological conditions at the lower openings of the body sufficient to account for the lowered vitality which alone could explain prolonged pathology. The removal of whatever orificial irritation may be encountered invariably enhances sympathetic nervous force, increases

the reactive power of the system, restores its susceptibility to the action of other remedial measures, and thus supplements in a most satisfactory manner the otherwise ineffective measures which the profession has had to offer for the relief of the chronically sick.

The anatomical and physiological facts upon which this philosophy is based have been so repeatedly presented to the profession as to render superfluous an additional presentation of them in the present report.

Let us take it for granted, therefore, that these well-established facts and theories are universally known and recognized, and that in all forms of chronic disease there will always be found orificial pathology sufficient to account for the sympathetic nerve waste which the existence of these conditions implies.

What we shall attempt on the present occasion, is to present to the profession, in general terms, what is to be expected from the application of orificial principles in the various forms of chronic diseases. Thousands of cases, which heretofore were regarded as incurable, have now been restored to health by orificial measures. Thousands of cases have also failed to respond satisfactorily to the treatment, and many have received lasting injury. The results of the work thus far obtained have proven beyond question (1) the universality of the need of orificial work in chronic diseases; (2) the unmistakable power of orificial surgery; (3) that greater care must be exercised in its employment, also that its methods must be so improved as to add to its efficiency as a remedial measure, and to deprive it of its power for harm.

All remedial measures known to the profession may be productive of untold mischief when wrongfully applied. Drugs can kill as well as cure, so can electricity; so can heat and cold; so can external applications, so can mental forces; but in the hands of the skillful and competent even edged tools should save life and not cost it. In spite, however, of the imperfection of present methods of applying orificial principles to the cure of chronic diseases, and in spite of the too numerous mistakes which have arisen from ignorance and meddlesome propensities, so much good has already been accomplished and so little harm, that the subject of orificial surgery demands the attention of the profession, demands to be enrolled upon the list of legitimate and scientific measures, and demands still farther to be added to the curriculum of all schools of medicine.

In the practice of orificial surgery, it must be remembered that the same principles of pathology which prevail elsewhere in the body must be recognized in examining its lower openings. The surgeon must not only take cognizance of hypertrophy, but must also recognize atrophy. He must not only look for abnormal stenosis, but also for abnormal dilatation. He must not only consider hyperæsthesia, but must observe likewise anæsthesia, and whatever orificial work he indulges in must be directed to the successful correction of whatever forms of pathology he may encounter.

It is now a well-established fact, which none but the ignorant will deny, that in all forms of chronic disease, there is invariably present some form of orificial irritation. It is also a fact, just as thoroughly established, that the removal of orificial pathology economizes the sympathetic nerve force, equalizes the capillary circulation, stimulates a universal nutrition, and favors a reaction from morbid conditions not only in the body generally but in each part of it in particular. When the hands of a watch fail to designate the correct hour of the day, the watchmaker is immediately persuaded that there is something wrong with the works of the timepiece. So, too, when the human body is disturbed in its functions, when the hands of this great clock of time point to a disorded eye, ear, nose, throat, heart, lungs, liver, stomach, spinal cord, skin, mucous membrane, kidney, or any of its other organs, the orificialist immediately understands that there is something wrong with the interior machinery. The peristaltic actions must have been disarranged, sympathetic nerve force must have been disturbed, and in the conditions of the lower openings of the body he will find ample excuse for the lowered vitality which has permitted the disorder to linger as a lasting condition.

What then may we expect from the application of orificial principles to chronic diseases? The proper answer to this question is another question. What may we expect in a given case from the universally improved capillary circulation and the increased nutrition involved? A dead body cannot be restored to life, neither can dead cells. An irritable body can be soothed, and so can irritable cellular structures. Sleepy organisms can be aroused to activity, and so can torpid cell-life. An engorged general system can be reduced, and so can congestion of tissues. A hungry human being can be fed, and so can starved structures. The commerce of the body,

which must have been imperfectly performed to permit the existence of local pathology, can be re-established and health restored just in proportion to the integrity of the cellular structure involved in the existing disease.

The orificial philosophy, therefore, does not merely introduce methods of correcting local pathology, but is more ambitious, and aspires to no less an achievement than the restoration of equilibrium to the circulation of the blood in its comprehensive expansion, thus dealing in detail with the active forces of life in all the cellular structures of which the body is composed.

The methods at present in vogue for correcting orificial pathology are not a proper subject for consideration in this report, and we must refer those who are not familiar with them and who desire to investigate the subject to the orificial writings, which are now sufficiently abundant to furnish the desired information. Our present object is to consider some of the results of the application of orificial principles to the various forms of chronic disease.

Realizing then that in applying orificial principles to chronic diseases we are dealing with general nutrition, affecting the depth of respirations, influencing the volume and rapidity of the pulse, stirring up *débris*, and thoroughly changing all bodily habits, we are prepared for a rehearsal of the effects of the work in the various forms which pathology assumes.

Affections of the skin and mucous membrane are the quickest to respond to orificial methods. Eczema, even in its most repulsive and chronic forms, is usually permanently cured in from one to four weeks' time. Psoriasis yields more slowly, and in some cases is not materially benefited by the work. Acne in its various forms is almost invariably cured in a few days' time. Chronic erysipelas and herpes also respond very satisfactorily to orificial treatment. Secondary syphilitic affections of the skin yield with remarkable rapidity to the treatment, especially when assuming the form of ulcerations. Urticaria disappears rapidly, but lupus and other forms of malignant disease are usually intractable. The mucous membranes are the next tissues affected by orificial work in point of time. Catarrhal affections of the different mucous membranes vary exceedingly in their persistency after orificial treatment. Chronic ophthalmia, ulceration and opacity of the cornea usually yield speedily, but nothing positive can be promised in cases of catarrhal conditions of the

eustachian tube and middle ear. Many cases of deafness from this cause have, however, been cured, but there also have been many failures. Nasal catarrh is usually benefited by the work, but it is generally necessary to supplement orificial treatment by the application of local measures and internal medication before permanent and satisfactory results can be secured. Chronic pharyngitis and laryngitis are always benefited, and frequently speedily exterminated. Bronchitis in a large majority of cases very speedily disappears. Gastric and intestinal catarrh are occasionally obstinate, especially catarrh of the colon, but usually they succumb rapidly to the application of orificial methods. Pernicious vomiting, even in cancer of the stomach, usually responds quickly to the work ; and constipation and diarrhœa find in it their panacea, with, of course, an occasional exception. Bilious and renal colic, jaundice, and catarrh of the urethral tract are also successfully handled.

Mere functional derangements of the internal organs, such as the brain, liver, stomach, heart, kidneys, etc., where the trouble lies in passive congestion and the consequent functional derangement, before interstitial changes have taken place in the organic tissues, respond with such marvellous rapidity to orificial measures as to constitute the most brilliant cures in the history of the work. Where mal-nutrition has been long prevalent, and serious structural changes have resulted, curative effects are necessarily much slower, and frequently a cure of such cases involves a complete change in nutrition ; and it is impossible to restore life to cells which are dead and merely waiting their burial. The work is full of surprises, however, even in this class of cases, as many troubles which heretofore have been considered incurable, such as spinal sclerosis, hypertrophy of the heart and liver, incipient stages of diabetes and Bright's disease, etc., are capable of repair to a greater extent than anybody has supposed ; and in most of these cases the prognosis, as recorded in the standard text-books, must be rewritten in the light of orificial accomplishments.

The universal truth that the irritation of an organ starts at its mouth, is not only true of the body as a whole, but also of its parts in particular. And although in bad cases of asthma, catarrhal deafness, conjunctivitis, dyspepsia, laryngitis, and so on, the general orificial work is first in order; before a cure can be effected, local attention will be required to the nose, ear, pharynx and larynx. In

chronic cellulitis and deep-seated abscesses, the results of orificial treatment, although slower than those obtained in skin and mucous membrane affections, are yet surprisingly satisfactory. In tubercular joint troubles the results of the work are necessarily slow because of the poor capillary supply of these parts. It is a matter of common experience, however, to obviate by the aid of orificial surgery, supplemented by other measures which influence capillary circulation, the necessity for many of the major surgical operations which would otherwise be required to make life tolerable for such patients.

Nodosities upon bone surface, even in syphilitic and tubercular subjects, are usually absorbed in a few weeks or months after the application of orificial methods. Conditions of necrosis and caries are checked and stimulated to repair, although they usually call for local surgical interference as heretofore. In such cases it is well to do the general work, and immediately after it, at the same sitting, correct what orificial irritation may be found.

The condition of the sexual organs has long been considered important in hip-joint disease, but it is equally important in affections of all joints. Renal colic has been repeatedly relieved by the use of urethral steel sounds. The tendency to bilious colic has been repeatedly cured by orificial methods, but I am not able to report the action of the work in acute cases. The reaction from orificial methods in sciatica, tic douloureux, and other forms of neuralgia, varies greatly as to the length of time. Some cases are spontaneously relieved, while in others many months elapse before a cure is effected, and in such cases orificial surgery seems but a basis for other remedial measures, its action being merely to increase the reactive power of the system, and render the measures already standard in the profession more readily effective.

Spinal cord and brain affections vary, as does the rest of the body, as to time required for repair. When paralysis is due to spinal or cerebral congestion, speedy cures are effected. When due, however, to structural changes, the action of the work is slower, and of course frequently ineffectual. Paresis yields in most cases slowly, although surely. Nevertheless, decided improvement can usually be secured in from one to three months. The action of orificial surgery in epileptics is sometimes instantaneous and permanent, sometimes tardy, and sometimes entirely ineffective. A few cases of blindness from atrophy of the optic nerve, and several

from paralysis have been speedily restored to sight. Atrophy and paralysis of the auditory nerve have also been cured, but it is not safe to promise restoration of hearing or sight in any case, as there have also been numerous failures.

In insanity, orificial surgery has already done a great work, although it is quite common for such cases to be aggravated for a few days or weeks after submitting to the treatment. A few cases of insane tendency have been precipitated into pronounced insanity by orificial treatment, but there is usually a satisfactory reaction in such cases, and convalescence can be relied upon after a longer or shorter period.

If there are latent poisons lurking in the system, as malarial or typhoid, orificial work is very liable to arouse them into activity, but only for a short time, and a speedy convalescence soon follows.

In a cure by orificial surgery, as in any other radical measure, chronic cases usually experience a return of their former symptoms in inverse order to their first appearance.

When chronic syphilis begins to disintegrate any portion of the physical man, its manifestations are speedily checked by orificial work, and a longer lease of life thus obtained. Several cases of exophthalmic goitre have been cured, and I do not now recall a single failure. Tuberculosis of glandular structures is usually an intractable disease. Orificial surgery, however, has made a surprisingly satisfactory record in pulmonary tuberculosis. In such cases there is always atrophy of the orificial tissues.

In tubercular subjects, the wounds upon the sexual organs usually heal satisfactorily, but those of the rectum require thorough and persistent treatment to prevent progressive ulceration, which, if not controlled, would exercise a detrimental influence upon the patient. In this class of patients, more than in any other, must the work be followed to a finish in order to secure satisfactory results. The reason of this, in all probability, lies in the fact that every cough is accompanied by a spasmodic contraction of the anus, which keeps the parts in motion and interferes materially with repair. The bad record which the operation for fistulæ in consumptives has made, was probably due to three things: (1) other rectal pathology, which is always present in such cases, was not corrected; (2) the methods of handling the fistulæ have been defective; and (3) no attention whatever

has been paid to pathology of the sexual organs. As the result of an extended experience in this class of patients, I have learned to place a high estimate upon the application of orificial principles, and to have more confidence in their operation than in any other one remedy yet suggested for pulmonary tuberculosis.

In cancers, the work has little action except to reduce to a considerable extent the zone of congestion about the cancer, and to increase the efficacy of other remedies. No permanent cure can be promised in cases of malignant tumors.

Sterility, endometritis, amenorrhœa, and dysmenorrhœa—in fact, the whole domain of gynæcology—must look to the application of orificial principles for the solution of its problems.

The action of thorough orificial work is very profound upon every part of the human body, and it requires a nicety of judgment which only time, experience, and natural qualifications on the part of the surgeon, can give, to decide in a given case the form and extent of orificial treatment that will be required to secure a desirable degree of reaction on the part of the patient, and at the same time avoid the danger of harmful or fatal shock. The time when satisfactory reaction may be expected varies, not only with the tissues diseased, but also with the individuality of the patients. Coughs, headaches, nausea, asthma, and numerous other derangements, when merely functional, frequently disappear instantaneously; and, on the other hand, it is often months, and sometimes a year, or even two years, before the good effects of orificial treatment become manifest. In a large percentage of chronic cases, orificial surgery will be a sufficient remedy, unaided, for a complete restoration to health. But it is a common experience to secure no other results from the work than merely a susceptibility of the system to other measures which will be required to complete the cure.

I have now applied the principles of orificial surgery to several thousands of chronic cases, and the preceding statements are based purely upon this experience.

In conclusion, I beg leave to present to you a brief analysis of one thousand cases which I have operated upon between the dates of June 1, 1890, to October 28, 1892, with a view to throw some light upon the classes of cases to which orificial surgery is applicable, and the relative frequency of the various forms of orificial pathology as they are encountered in the ordinary practice of orificial surgery,

and of the different methods employed for their relief. These cases are not selected ones, but taken consecutively as they applied for relief.

Of these 1000 cases, 515 were men and 485 were women. Twelve of this number were fatal cases. A brief description and analysis of these cases may be of interest, especially as in the light of more recent observation most of the deaths were unnecessary.

Of the men who died, the first was suffering from progressive paralysis, and died a few days after the American operation and circumcision.

The second was a desperate case of locomotor ataxia. He died in ten days after submitting to the American operation.

The third man was suffering from locomotor ataxia and tuberculosis, and died in one week after the American operation and circumcision.

The fourth and last case was in the last stage of locomotor ataxia, and survived the American operation and circumcision, and the removal of two cystic tumors from the testes, for six days.

Of the female fatal cases, the first one died of cellulitis, after dilatation of the rectum and uterine packing. She was a very delicate case, suffering from chlorosis. She had already been considerably improved in health under the American operation and uterine packing, but after the second packing, which was undertaken about a month after the first operation, she was taken with cellulitis and died.

The second female case, 35 years of age, suffering from chronic cystitis, had been operated upon ten years previously for laceration of the cervix by a skilful operator in a neighboring city. She had never menstruated since, and upon careful examination, the upper half of the uterine cavity was found completely glued together as a result of adhesive inflammation, evidently of years' standing. She was placed under an anæsthetic, and her rectum operated upon by the slit method, and the false adhesions broken up in the uterine cavity until it was of its normal size. As a result of this work her menstruation returned, and she attained an almost perfect degree of health. As her menstrual periods, however, were painful, and her irritation of the bladder was not entirely relieved, three months after the first operation she was again placed under an anæsthetic and the uterine cavity packed. This second work resulted in septicæmia and death.

The third female case was suffering from fibroid tumor and ovarian cyst of small size. After the American operation and uterine packing inflammation and death followed. A post-mortem revealed the fact that one of the cysts containing pus had ruptured into the peritoneal cavity.

The fourth female case was a subinvoluted uterus, measuring five inches in diameter, and retroflexed to an extreme degree. It was a case of nervous prostration. She was operated upon for laceration of the cervix. Her rectum was also trimmed and dilated. She died of peritonitis two weeks after the operation.

The fifth female case was one of mental depression and spinal irritation. Uterine packing and rectal dilatation were followed by septicæmia and death five weeks after the operation.

The sixth female case was one of chronic peritonitis and nervous prostration. The American operation and uterine packing resulted in fatal peritonitis. The post-mortem examination revealed an abscess of the ovary, which had broken into the peritoneal cavity.

The seventh female case was one of extreme nervous prostration and of tubercular tendency. She suffered from an extreme retroflexion and prolapsus. After the operation for laceration of the cervix and rectal dilatation she was attacked with pernicious vomiting, which was followed by peritonitis and death in six days after the operation.

The eighth and last case was a case of chlorosis, accompanied by a mild form of anæmia. After the operation for laceration of the cervix and rectal dilatation she developed peritonitis and empyema, and the chronic anæmia became acute. She died seven days after the operation.

In explanation of the death of the male patients, I have no comment to make except that they were all of them extremely desperate cases and very near their dissolution, and the operation was a forlorn hope. Their reactive powers were so feeble that they did not respond to the measures and their lives were unquestionably shortened to some extent as a result of the operative interference.

It would undoubtedly have been better in the cases of the men to have subjected them to the milder forms of orificial treatment before the severer measures were undertaken. This precaution might possibly have proved more satisfactory and spared the necessity of placing their names on the list of those who have been injured by the work. The lesson is certainly a profitable one.

For the death of the female cases, however, there is a very good reason, which does not appear in the statement of the cases. At the time these cases were treated, in performing the toilet of the endometrium, after dilating the uterus I was in the habit of injecting into the uterine cavity a weak solution of chloride of zinc, and in cases in which the packing was used, the packing was saturated with glycerin. Suspecting that these two substances had something to do with the unfortunate results, and hesitating to believe that curetting and cleansing the uterine cavity and packing it after free dilatation was a measure dangerous to life, I have since omitted the employment of the chloride of zinc solution and introduced an antiseptically prepared packing, perfectly dry, employing bichloride of mercury, 1–4000 solution, previous to the packing. In each case I am now also in the habit of packing the uterus twice; once to soak up all that remains in the uterus of the bichloride solution, and once to get the effect of a longer dilation than I could obtain from merely the use of sounds.

I am very glad to report that since this change in the treatment, which has now been nearly a year, I have not only escaped the pain of a fatal case, but have not even induced either metritis or cellulitis.

The seventh of the female cases reported did not owe her death, I am satisfied, entirely to the manner of treatment, but in part at least to the extreme retroflexion, aggravated by uncontrollable vomiting. A wiser judgment in this case would have decided to shorten the round ligaments, or by some other procedure to have held the uterus in proper position while she was recovering from the operations. In the light of what is now known, therefore, this list of deaths of the female cases would probably have been reduced to one, and possibly not that.

The first and second cases I consider examples of meddlesome surgery. The cases were doing well and should have been let alone. Instead of that, while in a sensitive state they were subjected to severe secondary work, which, with the other causes mentioned, resulted to their harm.

There have been no deaths from the employment of an anæsthetic, although, as will be seen later on in this report, it was given indiscriminately to cases suffering from heart, kidney, lung, brain, and spinal cord troubles of a serious nature. In view of these facts

there is every reason to hope that the record of the next 1000 cases will not be marred by the blemish of fatality even in a single instance.

Of these 1000 cases 107 were placed under an anæsthetic a second and sometimes a third time for what may be called finishing work. In chronic metritis it is very frequently impossible to secure satisfactory results from simply one treatment, even if thoroughly performed. Granulations will reform and require oftentimes two or three vigorous curettings and packings before a satisfactory condition of the endometrium is secured.

After the American operation in some cases there is a tendency to stricture. This may be overcome either by systematic and repeated dilatations as they can be borne by the patient, or by one or possibly two thorough dilatations under an anæsthetic.

It is necessary that all orificial work should be followed to a finish until an ideal condition is attained, in order to obtain universally satisfactory results.

If those cases which are reported as failures should be examined to-day orificially, they will be found to present an abnormal condition of the orifices, perhaps in a more extended form than before they were first operated upon. In such cases this condition is either the result of poor work or unfinished work, and, of course, should be charged to these accounts rather than reported as arguments against the philosophy.

After the first work has been performed, patients should never be treated to secondary work so long as improvement in their condition continues. The time of reaction from orificial work varies not only with the disease with which the patient is afflicted, but also with different individuals suffering from the same disease. Marvellous improvement will oftentimes be instantaneous, and the list of most brilliant cures conceivable is a long one. It is quite common, however, for three, six, nine, and even twelve months, or longer, to elapse before satisfactory reaction takes place even in cases which finally recover as a result of the work.

The following is a list of chronic diseases under which these 1000 cases have been classified. Many times a patient would be suffering from more than one trouble, but they have been registered under the most prominent difficulty.

5 cases of acne; all of which were cured.
1 case of acromegalgia; which was greatly improved by the work.
4 cases of amenorrhœa; 3 cured, 1 unaffected.
18 cases of anæmia; 15 cured, 3 improved.
5 cases of aphasia; 2 cured, 2 improved, 1 unaffected.
20 cases of asthma; 12 cured, 6 improved, 2 unaffected.
5 cases of blindness; 3 cured, 1 improved, 1 unaffected.
5 cases of bronchitis; all cured.
43 cases of cancer; some of them improved for a time; no cures.
2 cases of caries of the femur; 1 improved, 1 unaffected.
5 cases of chronic cellulitis; 4 cured, 1 unimproved.
3 cases of chorea; 1 cured, 1 improved, 1 no better.
342 cases of constipation; 308 cured, 10 improved, 14 unimproved.
32 cases of cystitis; 29 cured, 3 unimproved.
5 cases of deafness; 1 cured, 3 improved, 1 no better.
1 case of delirium tremens; cured.
5 cases of diabetes; no cures, but all improved.
15 cases of diarrhœa; 14 cured, 1 unaffected.
1 case of dropped wrist; no better.
8 cases of dropsy; 7 cured, 1 unimproved.
195 cases of dysmenorrhœa; 174 cured, 10 improved, 9 unimproved.
123 cases of dyspepsia; all cured.
14 cases of dipsomania and morphia habit; all improved, but no radical cures.
13 cases of eczema; all cured.
1 case of empyema; improved.
3 cases of enuresis; cured.
11 cases of epilepsy; 5 cured, 6 improved.
10 cases of fibroids; 3 cured, 7 improved.
150 cases of headaches; 135 cured, 10 improved, 5 unaffected.
14 cases of heart disease; 8 greatly improved, 6 partially so.
302 cases of hæmorrhoids; all cured.
5 cases of hip-joint disease; all improved and progressing to recovery.
16 cases of hysteria; 10 cured, 4 improved, 2 unimproved.
13 cases of impotency; 11 cured, 2 relieved.
23 cases of insanity; 18 cured, 6 failures.

36 cases of insomnia; 18 cured, 9 improved, 9 unaffected.
1 case of jaundice; cured.
128 cases of liver derangement; 122 cured, 2 improved, 4 unaffected.
46 cases of locomotor ataxia; 20 cured, 15 improved, 11 unaffected.
1 case of lupus; no improvement.
51 cases of melancholia; 46 cured, 5 improved.
1 case of meningitis; no improvement.
10 cases of nephritis; all improved.
15 cases of nervousness; 10 cured, 5 improved.
345 cases of nervous prostration; 300 cured, 25 improved, 20 unaffected.
29 cases of neuralgia; 26 cured, 3 unaffected.
50 cases of ovarian irritation; 41 cured, 9 unimproved.
31 cases of paralysis: 16 cured, 10 improved, 5 failures.
2 cases of paralysis agitans; both failures.
13 cases of paresis; 10 cured, 2 improved, 1 unaffected.
1 case of phlebitis; cured.
24 cases of proctitis; all cured.
6 cases of prolapsus of the rectum; all cured.
8 cases of prostatitis; 6 cured, 2 improved.
5 cases of pruritis ani; cured.
2 cases of pyæmia; unaffected.
17 cases of rheumatism; all improved.
48 cases of spermatorrhœa; 44 cured, 4 unaffected.
28 cases of spinal irritation; 20 cured, 8 improved.
12 cases of sterility; 10 cured, 2 unaffected.
8 cases of stricture of rectum; all cured.
2 cases of salpingitis; both cured.
47 cases of tuberculosis; 40 cured, 3 improved, 4 unaffected.

The oldest patient operated upon was 84 years of age; the youngest was a child of 2 years. As to the methods employed in the preceding cases, they were selected with reference to the general condition of the patient rather than the form of local patholoyg encountered; the severer measures being employed, as a rule, in the more desperate conditions. As all the cases were submitted to all-around work, and usually, at the same sitting, each patient was subjected, as a rule, to several operations, one upon the rectum and one

or more upon the sexual organs. The summing up of the operations, therefore, will be greatly in excess of the cases reported upon.

The following is a list of the operations performed:

American operation,	435
Circumcision,	135
Laceration of the cervix,	199
Loosening of the hood of the clitoris,	279
Slitting of the hood of the clitoris,	13
Removal of the hood of the clitoris,	21
Fistulæ,	33
Clipping of the fræenum,	351
Excision of hæmorrhoids,	258
Enlarging meatus,	343
Uterine packing,	178
Removal of papillæ,	373
Removal of pockets,	392
Dilatation of the male urethra,	237
Trimming and dilatation of the female urethra,	271
Cutting of the sphincters,	65
Removal of the hymen,	42
Hyperspadies,	5
Varicocele,	21
Hydrocele,	8
Secondary operations,	107

One word concerning severing the sphincters. As this work resulted in several cases of incontinence of fæces, which required secondary operations to cure, and some of which remain still uncured because unwilling to submit to further treatment, I have abandoned the practice except when operating for certain cases of fistulæ in ano and operating for laceration of the perinæum. Cases of incontinence of fæces from severed sphincters can all be restored to a normal condition if patients are willing to undergo a secondary operation. But as there is frequently difficulty in obtaining their consent to this, I thought best to rely solely upon dilatation in future, except in the cases mentioned. In operating upon the cases of tuberculosis, heart disease, affections of the kidneys, and paralysis, which have been regarded as dangerous subjects for the employment of anæsthetics, it has been my custom to precede the operation by the dilatation of the anus more or less thoroughly, according to the effect which it produced upon the respiration. During an operation upon such cases, when the blood becomes dark, indicating poor

oxygenation, the operation and the anæsthetic were suspended, and dilatation was again practiced until the blood was again arterialized.

There has not been a single case in which the anæsthetic has seemed to be productive of even the slightest degree of harm, but rather of benefit. And in view of the marvellous action of rectal dilatation as a means of resuscitation from a too profound anæsthesia, the application of anæsthetics in every form of case seems to be perfectly devoid of danger. The knowledge of this fact should be widely spread, as it will speedily put an end to the record of deaths from chloroform and ether.

The anæsthetics employed have been in fully 95 per cent. of the cases a mixture of one part chloroform to two parts ether. It has been necessary, especially in cases of spinal sclerosis, insanity, and those addicted to the morphine and liquor habits, to employ pure chloroform instead of the mixture. It has never proved necessary, even in heart trouble, to employ ether alone. In kidney troubles chloroform has been preferred as an anæsthetic.

The large percentage of the cases operated upon have been extremely difficult ones, and oftentimes desperate. And it has been no fault of the cases that the death-rate has not been greater and the percentage of failures a much larger one. As a rule, patients have been subjected to the operation without any previous line of treatment, in order to immediately stop the nerve waste, flush the capillaries, and increase the re-active power of the system. The after-treatment of these cases has been not only local but general, and all means of cure at my command have been employed to aid in securing satisfactory results. These measures have included the pneumatic cabinet, electricity, massage, sun baths, Turkish baths, skin frictions, spinal cuppings, Swedish movement cure, dieting, abdominal respirations and light calisthenics combined, mental therapeutics, and as skillful prescribing as I was capable of. The local after-treatment has consisted of douches, ointments, the local application of drugs, and general measures useful in the healing of wounds, and in the subsequent use of rectal dilators and male and female urethral and uterine sounds, colon flushings, bladder and uterine douchings, as they seemed to be required. The local treatment, except that for the healing of the wounds, has not been routine, but based upon the reactive power of the patients, always giving the case ample time for reaction between treatments.

It would be a great advantage in many of the cases, if it were possible, to subject them to preparatory treatment before they were operated upon, even where operative treatment is essential to recovery. The reason that this practice has not been followed more extensively has been because of the patients themselves. Their impatience of delay, their impetuosity, their inability to spend the requisite amount of time and money which such a procedure implies, has seemed to demand an early and radical interference. Almost all of the patients have been under treatment of some kind for a series of years, and have lost faith not only in doctors but in humanity, and they are not in a frame of mind to brook delay. They must see an immediate change or they speedily become dissatisfied.

As the death-record which we have presented to-day was almost entirely the result of faulty methods, which I have since corrected, I cannot condemn the practice of proceeding at once with whatever operation is required as soon as it is decided to be necessary.

This report, which I now submit for your consideration, presents the subject of orificial surgery in the light purely of a last resort. In these cases it has simply been employed after all other tried measures have failed. The methods called for in such cases have necessarily been extremely severe, but should never be dangerous if proper judgment is exercised in selecting cases and methods of operation.

If orificial surgery can cure and relieve such large percentages of the abandoned cases of professional practice, it will certainly demand consideration at the hands of the profession as a means of prevention. The measures which it has to offer for this purpose are so much milder as to escape the censure of those who are prejudiced against surgical measures as aids to the health and happiness of mankind. What can be cured can be prevented, and when the first or predisposing causes of chronic disease once becomes thoroughly appreciated by the medical profession, they will speedily busy themselves more energetically in making use of whatever is calculated to save the communities under their charge from the discomfort, unhappiness, agony, and premature dissolution which results from ignorance or neglect of the causes which slowly but surely sap vitality, undermine constitutions, destroy reactive power, and pre-

dispose humanity generally to its numberless varieties of unnatural disaster.

This report is now respectfully submitted for your consideration:

		Cured. Per cent.	Improved. Per cent.	Unimproved. Per cent.
5	Acne,	100	.....	.....
1	Acromegalgia,	.....	100	.....
4	Amenorrhœa,	75	.....	25
18	Anæmia,	83⅓	16⅔	.....
5	Aphasia,	40	40	20
20	Asthma,	60	30	10
5	Blindness,	60	20	20
5	Bronchitis,	100	.....	.....
43	Cancer,	Some improved.		
2	Caries of femur,	.....	50	50
5	Cellulitis,	80	.....	20
3	Chorea,	33⅓	33⅓	33⅓
342	Constipation,	90	6	4
32	Cystitis,	90	.....	10
5	Deafness,	20	20	20
1	Delirium tremens,	100	.....	.....
5	Diabetes,	.....	100	.....
15	Diarrhœa,	93	.....	7
1	Dropped wrist,	No improvement.		
8	Dropsy,	88	.....	12
195	Dysmenorrhœa,	90	5	5
123	Dyspepsia,	100	.....	.....
14	Insomnia, Morphia,	.....	100	.....
13	Eczema,	100	.....	.....
1	Empyema,	.....	100	.....
3	Enuresis,	100	.....	.....
11	Epilepsy,	45	55	.....
10	Fibroids,	30	.....	70
150	Headaches,	90	6⅔	3⅓
14	Heart disease,	.....	57	43
312	Hæmorrhoids,	100	.....	.....
5	Hip-joint disease,	.....	100	.....
16	Hysteria,	62½	25	12½
13	Impotency,	84½	15½	.....
23	Insanity,	74	.....	26
36	Insomnia,	50	25	25
1	Jaundice,	100	.....	.....
128	Liver derangement,	95	2	3
46	Locomotor ataxia,	43½	32	25
1	Lupus,	.....	.....	100
51	Melancholia,	90	10	.....
1	Meningitis,	.....	.....	100

		Cured. Per cent.	Improved. Per cent.	Unimproved. Per cent.
10	Nephritis,	100	.....	.....
15	Nervousness,	66⅔	33⅓	.....
345	Nervous prostration,	87	7	6
29	Neuralgia,	90	.....	10
50	Ovarian irritation,	81	.....	19
31	Paralysis,	51	33	16
2	Paralysis agitans,	.....	.....	100
13	Paresis,	77	9	4
1	Phlebitis,	100	.....	.....
24	Proctitis,	100	.....	.....
6	Prolapsus of rectum,	100	.....	.....
8	Prostatitis,	75	25	.....
5	Pruritus ani.,	100	.....	.....
2	Pyæmia,	.....	.....	100
17	Rheumatism,	.....	100	.....
48	Spermatorrhœa,	91⅔	.....	8⅓
28	Spinal irritation,	72	18	.....
12	Sterility,	83⅓	.....	16⅔
8	Stricture of rectum,	100	.....	.....
2	Salpingitis,	100	.....	.....
47	Tuberculosis,	85⅓	6	9
2357		84.85	9.46	5.69

Discussion.

W. E. Green, M.D., of Little Rock, Ark.: It is with considerable misgiving, that I undertake to discuss a paper of such great importance, and written by so distinguished a clinician as the one just heard. This, like every other article that emanates from the pen of Dr. Pratt, is full of solid fact that will be instructive to the entire profession. Every member of this body, who has practiced orificial surgery to any extent, can verify from personal experience the truthfulness of his teaching, and thousands of patients, who have been cured by its methods, will speak praises in its behalf. It is a mode of treatment based upon the theory of reflexes, and deals with diseases surgically. A successful orificialist must be an accomplished physician of good judgment, and a likely operator; he should not alone be able to clip away pockets and papillæ, but he should be competent to execute dexterously, and manage the most important surgical operations. He should be able to decide at once, when operating, the demands of every case and perform well the operation that will give the best results. It will not answer to treat the rectum and leave a lacerated cervix, or to dilate the cervix, and neglect an endometritis; repair a perinæum and overlook a cystocele. Nor will it answer to do a trachelorrhaphy when an amputation of

the cervix is demanded. Neither should a patient be submitted to an excision, if a less formidable procedure will answer as well.

Sometime ago, I was called to see a lady, who had been ailing for months: she remarked that she had undergone orificial treatment; both her womb and rectum had been operated upon (the womb dilated and pockets removed from the rectum), but without benefit. Her trouble was neuralgia of the stomach. Upon an examination, I found a badly lacerated cervix, with the lips everted, thickened and eroded; there was a severe endometritis and consequent uterine enlargement; a profuse, glairy discharge issued from the os, besides a bad hæmorrhoidal condition existed. I anæsthetized her, dilated and curetted the uterus, repaired the cervix, dilated the urethra and cut away excrescences from about the meatus and did an excision of the bowel. The recovery was prompt and satisfactory.

I know of no class of operations where more is required of the surgeon, and there are none where experience counts for more. A perplexing feature of the practice, is to know in just what cases it will prove curative; at best, we are often doomed to dismal disappointment, for as long as the human mind is prone to mistakes, accurate knowledge in this particular, cannot be acquired. However, with study and experience, we can hope to approximate a reasonable degree of certainty.

The orificialist cannot ignore pathology. The more thorough our knowledge of pathology, the more perfect our powers of diagnosis, and the more extensive our experience the more confident will we be of our results. For in diseases and conditions known to be incurable, orificial surgery would certainly not be applicable; though, even in some of these cases it will often prove palliative. I was recently called to see a case of advanced uterine cancer. The patient was suffering so intensely, that large doses of morphine, ¾ to one grain, were necessary to quiet her pains; she had also bad hæmorrhoids, so I did an orificial operation upon her rectum. Her suffering was so greatly relieved from it, that she quit the morphine and gained in both flesh and strength.

The influence of a properly conducted orificial treatment reaches remote organs through its action upon the sympathetic nervous system, and its ganglionic connection, stimulating capillary circulation, thereby relieving congestion of parts, improving nutrition and inducing tissue changes necessary to recovery. Through this means, a failing heart will take on fresh vigor by being relieved of the burden imposed through a sluggish circulation. In the same way, congested and hypertrophied organs will be relieved, and healthy action restored; but functional disturbances yield most readily to its influences.

For the benefit of the oculists that are present, I will relate a case of hyperphoria that I cured by an orificial operation. Haussel con-

cludes, after careful clinical study, "that this is a real affection, and that in highly sensitive subjects reflex functional disorders may be produced by it." May he not be reasoning from effect to cause? The patient, a maiden lady, of about 35, was suffering from a most severe headache of long standing, with great disturbance of vision. After treating her for some time without success, I referred her to an oculist, who diagnosed hyperphoria and recommended tenotomy for its relief. As there was evident uterine and rectal disorders, I proposed an orificial operation, which was conceded. After anæsthetizing her, I dilated the vagina, removed the hymen, dilated the urethra, slit up the hood of the clitoris, dilated and curetted the uterus, removed pockets and papillæ and hæmorrhoids from the rectum and dilated the sphincter ani muscles. She promptly recovered from both the headache and eye affection; besides, a congested and sensitive condition of the tubes and ovaries was relieved. She is now strong and well.

Though I am a firm believer in orificial surgery, there are some conditions in which my experience does not carry me to such a state of enthusiasm as does Dr. Pratt's. Should I see permanent benefit derived from an operation upon a patient suffering from advanced paresis, atrophy of the optic nerve, locomotor ataxia, cancer and some other diseases mentioned, I would simply conclude that I was mistaken in my diagnosis. Nor have I ever seen a latent typhoid or malarial condition develop; I have always designated such cases, septic.

Three or four years ago, I reported a case of locomotor ataxia greatly and permanently improved by an orificial operation. Some time ago, after again indulging in excessive drink, the severity of symptoms were redeveloped. Upon a more careful and systematic investigation, I decided the trouble was not locomotor ataxia but multiple neuritis. I have in the past two years operated upon other cases of undoubted locomotor ataxia, without permanent benefit in any case. I deem it of as much importance to report failures as successes.

Atrophied tissue, where the structure has been entirely destroyed, certainly cannot be relieved. While I concede that some cases of nasal catarrh may be benefited, or even cured, I do not believe that operations upon the lower orifices will remove hypertrophic rhinitis, especially where there is ecchondrosis or much thickening of the turbinated bones. I would bespeak greater certainty in effect were the conditions attached *in situ*. But why exclude operations upon the nose and throat from the domain of orificial surgery; are they not as much orifices of the body as are the lower openings? I am quite certain that I have seen just as magical results follow the removal of diseased conditions here, as I ever have from operations upon the rectum, uterus or penis. I have frequently witnessed an

entire restoration to health after removing hypertrophied tonsils or relieving a stenosis of the nasal passage. I have often had children brought to me that were dwarfed both mentally and physically, brighten up and grow strong, after such treatment. Headaches, asthma, coughs, bronchitis, pulmonary troubles, visual disturbances, neuralgia, vertigo, tinnitus aurium, deafness, dyspepsia and anæmia, in fact, almost every disorder that may be produced through the reflexes.

If our efforts are, to correct malnutrition caused by vaso-motor disturbances, why neglect this source? If a perverted rhythm, or peristalsis as the doctor says, implies disease, and this rhythmical part of man's existence is governed by the sympathetic system, why may not the trophic lesion be located in the nose as well as the anus? Anatomy teaches us that these parts are supplied with sensory filaments that connect through their ganglionic relations with every other part of the human organism. May not a motor impulse for good or bad, started here, extend its energy to all distant organs? Take up the sympathetic nervous system from above, and trace it through its various plexes to the different ganglia and see what your conclusions will be. You will find that a perverted force may be transmitted to the eyes, face, throat, ear, brain, heart, lungs, abdominal viscera, etc.

It is a cardinal principle in orificial surgery, to let no diseased orifice escape. The work must be "all round" and thorough.

REPORT

OF THE

SECTION IN OPHTHALMOLOGY AND OTOLOGY.

CHICAGO, Wednesday, May 31, 1893.

THE Section in Ophthalmology and Otology assembled in Hall No. VIII. of the Art Building, at 3 o'clock P.M.

The Section was called to order by A. B. Norton, M.D., of New York, N. Y., Chairman, who then delivered the Sectional Address.

At the suggestion of the Chair, a motion was offered and adopted, providing that those papers whose authors are present at the meeting be first presented and discussed in the order in which they appear on the published order of business, and that the remaining papers be then presented and considered so far as time might permit.

Dr. E. H. Linnell, of Norwich, Conn., read a paper on "Exophthalmic Goitre."

At the conclusion of the reading, the Chair asked for a decision by the Section regarding the time to be allowed for the reading of each paper, and for each member taking part in the discussion.

On motion of Dr. Wm. R. King, of Washington, D. C., the time for the reading of a paper was limited to twenty minutes, with ten minutes for each of those appointed to lead in the discussions, and five minutes for other speakers.

Dr. Linnell's paper was then discussed by Drs. J. H. Buffum, of Chicago, Ill., and F. Parke Lewis, of Buffalo, N. Y.

Dr. Thomas M. Stewart, of Cincinnati, O., read a paper entitled "The Refraction of the Eye." It was discussed by Drs. Charles H. Helfrich, of New York, N. Y., D. A. MacLachlan, of Ann Arbor, Mich., Myron H. Chamberlin, of Council Bluffs, Ia., Harold Wilson, of Detroit, Mich., E. H. Linnell, of Norwich, Conn., E. Elmer Keeler, of Syracuse, N. Y., Wm. R. King, of Washington, D. C., and by the author of the paper.

Dr. King moved that when the meeting adjourn, it be to meet at 8 o'clock this evening, in order that the papers remaining unread at

the close of the present session may then be considered. The motion was adopted.

The next paper read was by Dr. Elmer J. Bissell, of Rochester, N. Y. It was on the subject of "Ophthalmic Surgery," and was discussed by Drs. B. B. Veits, of Cleveland, O., C. H. Vilas, of Chicago, Ill., A. F. Randall, of Port Huron, Mich, Harold Wilson, of Detroit, Mich., F. Parke Lewis, of Buffalo, N. Y., A. B. Norton, of New York, N. Y., and Dr. Bissell, the author of the paper.

The session then adjourned until 8 o'clock P.M.

The Section reconvened at 8 o'clock—Dr. Norton in the chair.

Dr. Harold Wilson then presented a paper on "The Study and Correction of Heterophoria." He read portions of the essay, and gave a brief *résumé* of the remaining portions. A discussion followed, participated in by Drs. John H. Payne, of Boston, Mass. (whose remarks, in the absence of Dr. Payne, were read by the Secretary), E. H. Linnell, of Norwich, Conn., Wm. R. King, of Washington, D. C., Thomas M. Stewart, of Cincinnati, O., M. H. Chamberlain, of Council Bluffs, Ia., and by the author of the paper.

Dr. Henry F. Garey, of Baltimore, Md., read an essay on the "Efficacy of the Vibrometer in Applying Vibratory Massage in Aural Disease." Its discussion was by Drs. Wm. R. King, E. H. Linnell, Harold Wilson, Henry C. Houghton, of New York City, and by the Section Chairman, Dr. A. B. Norton.

The Chair suggested that the paper by Dr. C. F. Sterling, of Detroit, Mich., on "The Homœopathy of Aural Therapeutics," should now be taken up. In the absence of its author, Dr. H. C. Houghton, of New York City, gave a careful abstract of the essay, with brief comments thereon. The paper, together with a written discussion of the subject by Dr. Hayes C. French, of San Francisco, Cal., was then accepted and referred for publication.

Dr. Houghton then read his paper on "Aural Therapeutics," which (he said) was adapted to follow the paper of Dr. Sterling.

A paper by Dr. Howard P. Bellows, of Boston, Mass., entitled "Some Recent Advances in Otology," together with a written discussion of the subject by Dr. Francis B. Kellogg, of Tacoma, Wash., was then presented by title and accepted. Also a paper by Dr. James A. Campbell, of St. Louis, Mo., on "Ocular Reflex Neuroses."

The Sectional meeting then, on motion, adjourned.

INAUGURAL ADDRESS.

By A. B. Norton, M.D., New York, N. Y., Chairman.

Mr. President, Members of the Congress:

My first duty is to express my sincere appreciation of the high honor conferred upon me in selecting me to preside over such an important section as that of Ophthalmology and Otology. The deliberations of this body, composed as it is of the brightest lights in our special department of medicine, are destined to redound to the credit of our school, and to the benefit of humanity. The sessions of this section will be devoted to the study of two of the smallest yet most important organs of the human body, for none are of more value, none more useful, and none capable of conveying keener emotions of pleasure to the soul, than the eye and ear. How fitting, therefore, that this should have been the first-born of the specialties in medicine; and what advances it has made since the late Dr. E. Williams, of Cincinnati, the pioneer among the specialists of this country, less than forty years ago commenced the exclusive practice of the diseases of the eye and ear. At that time the discovery of the ophthalmoscope, which was the real stepping-stone to our present-day knowledge of the eye, and which has done more toward the preservation and restoration of sight than any one other discovery either before or since, had just been made by the renowned Helmholtz, and heralded throughout the world by all interested in this specialty. At about this same period the works of Von Graefe, Helmholtz, Donders, and others, gave an impetus to the study of ophthalmology which is still felt and can never be checked.

While our Old-School friends can claim to have been the pioneers in the exclusive practice of this specialty, Homœopathy was but a few years behind them, and it seems to me appropriate to briefly refer at this time to the early history of this special department of medicine in our own school. Following close upon the footsteps of

Drs. Williams, Agnew and others, who commenced the exclusive practice of diseases of the eye and ear, from 1855 to 1860, we find that Dr. C. H. Angell, of Boston, was the first man in our school to commence the exclusive practice of this specialty.

Dr. Angell graduated from the Homœopathic Medical College of Pennsylvania, in 1852, and first located in Salem, later in Lynn, Mass., and in 1857 removed to Boston. In 1861 he visited Europe, and studied with Profs. Arlt and Jaeger, of Vienna, Von Graefe, of Berlin, and in the eye clinics of both Paris and London. He returned in 1864, and since then has practiced exclusively as an oculist and aurist. In 1870, Dr. Angell brought out the first work upon *Diseases of the Eye* from the standpoint of a Homœopathic oculist; the fame of this work, and consequently of its author, is simply told in the fact that it has reached its eighth edition. Dr. Angell, as Professor of Ophthalmology in the Boston University School of Medicine, still continues to teach the value of Homœopathy in diseases of the eye.

Dr. C. Th. Liebold, who, with Dr. Angell, were the earliest exclusive specialists in our school, commenced to devote his exclusive study to diseases of the eye and ear in the old Bond Street Dispensary, in New York, soon after the close of the war, during which he had served with honor as a general surgeon. In 1867, he was appointed surgeon to the New York Ophthalmic Hospital, where he remained in continuous faithful and skillful service until his death in December, 1885. In 1870, Dr. Liebold was made Professor of Ophthalmology in the New York Homœopathic Medical College, which chair he still filled at the time of his death. As an ophthalmic surgeon Dr. Liebold was equalled by few and excelled by none, while as a Homœopathic physician his knowledge of and reliance on the action of drugs saved many an eye that would have otherwise been lost.

In 1867, the Board of Directors of the New York Ophthalmic Hospital placed the medical control of that institution in the hands of Homœopathic physicians, Drs. T. F. Allen and C. Th. Liebold constituting its surgical staff. The New York Ophthalmic Hospital of to-day, treating upwards of 14,000 patients annually, bears a living testimony of the value of Homœopathy in the diseases of the eye and ear, and of the thoroughness with which its work was inaugurated by Drs. Allen and Liebold.

Dr. Henry C. Houghton, graduating at the New York University Medical College, in 1867, became at once interested in the ear as a specialty. He has been associated with the New York Ophthalmic Hospital since its opening as a Homœopathic institution, and is to-day the senior surgeon as well as a director of that hospital. In 1873, Dr. Houghton commenced to practice exclusively as an aurist, and in 1882 was made Professor of Otology in the New York Homœopathic Medical College. His work on *Clinical Otology*, issued in 1885, is to-day the standard text-book of our school.

Dr. W. H. Woodyatt, graduating in 1869, immediately went to New York to make a special study of diseases of the eye and ear, spending his time at the New York Ophthalmic Hospital, at Dr. Knapp's clinic, and the clinics of the Manhattan Eye and Ear Hospital, and the New York Eye and Ear Infirmary. In 1871 he located in Chicago, and was appointed Professor of Ophthalmology and Otology in the Hahnemann College, and subsequently in the Chicago Homœopathic Medical College. Dr. Woodyatt was one of the ablest men in our specialty, a thorough diagnostician, a skilled surgeon, a true homœopath. His untimely death in January, 1880, robbed our professon of one of its brightest men.

Dr. George S. Norton, graduating at the New York Homœopathic Medical College, in 1872, and the same year at the New York Ophthalmic Hospital, was immediately appointed resident surgeon, later becoming a surgeon, senior surgeon, and director to the New York Ophthalmic Hospital, was the next one in our school to enter into the exclusive practice of eye and ear diseases. In 1876 Dr. Norton, in conjunction with Dr. T. F. Allen, brought out the *Ophthalmic Therapeutics*, the second edition of which, issued in 1881, was by Dr. Norton alone. In 1886 Dr. Norton succeeded Dr. Liebold as Professor of Ophthalmology in the New York Homœopathic Medical College, and in 1889 commenced the publication of the first special journal of our school, *The Journal of Ophthalmology, Otology, and Laryngology*. In addition to these, Dr. Norton was also at the time of his death, January 30, 1891, consulting ophthalmic surgeon to several hospitals and institutions.

Following in rapid order, our corps of exclusive specialists was, within a few years, increased and strengthened by such men as Campbell, of St. Louis; Phillips, of Cleveland; Winslow, of Pittsburgh; Vilas and Buffum, of Chicago; McDermott, of Cincinnati;

Boynton, of New York; Lewis, of Buffalo; and so on, until to-day we find in every large city, and many of the smaller ones, one or more Homœopathic oculists and aurists. Those of us who have more recently commenced the practice of this specialty should be, and I believe are, grateful to our predecessors for the work they have done, They laid the foundations on which we are building, and we do them honor for the thoroughness in which that work was done under the many difficulties of the time. We who have to-day our special ophthalmic colleges, journals, and text-books from which we can learn the special applications of our Homœopathic remedies in diseases of the eye and ear, little realize the difficulties experienced by the pioneers in the field who had to discover and make a special Materia Medica for the varying diseases of the eye and ear.

The status of the Homœopathic specialist of to-day, in this department at least, is certainly equal to, and we believe in the majority of cases excels, that of the Old School. I say this because the majority of the *Homœopathic* oculists and aurists of to-day are graduates of a *special* college giving a *legal degree* as eye and ear surgeon to physicians only, and that after a most thorough didactic and clinical course of six months. In the Homœopathic School is the only special college in this country having a right to grant the *legal degree* as eye and ear surgeon, while the very large majority of the Old-School specialists are such after a course of from six weeks to three months only, apparently believing that skilled specialists can be made in this short time. Therefore I claim that our Homœopathic eye and ear specialists are better and more thoroughly educated as a body than are those of any other school in this country.

To the question, What has Homœopathy accomplished in this department of medicine? we would answer, a great many more things than time will allow us to refer to on this occasion; hence, we must content ourselves with the mere general mention of a few. First, in cataract, that most important of all the diseases of the eye, of which the simple mention of its name calls up visions of blindness to us all. Experience teaches us that in the early stages of senile cataract, upon which every authority, with possibly one exception, agrees that if left to itself will inevitably progress, and sooner or later lead to blindness, it can be held in check by the use of Homœopathic

remedies, and the vision be held intact for years, thus avoiding the necessity of the knife. In suppurative inflammations of the uveal tract our remedies, especially Rhus tox., have proven of incalculable value. In some cases that seemed destined to total destruction of the eye, both its structure and function have been restored to normal again by the administration of this drug. In nearly all the inflammations of the eye, especially of the cornea, conjunctiva, and iris, the use of Homœopathic remedies will cut short the disease several days earlier than the most approved Old-School treatment of the present day. In the ear, every Homœopathic specialist has seen cases of acute inflammation of the middle ear, and even threatened involvement of the mastoid, cut short and prevented by such remedies as Ferrum phos., Capsicum, Bellad., Hepar, etc. In chronic catarrhal deafness, improvement in the hearing is often secured by the administration of the Calcareas, Kalis, Mercuries, etc., and frequently in cases that have been through the hands of our Old-School friends with no benefit. The value of Homœopathy in the treatment of diseases of the eye and ear is easily demonstrated to any unbiassed observer who will give our remedies a fair, conscientious trial. Take, for example, the different varieties of keratitis or conjunctivitis; let a given number be treated under the most approved local, operative, and constitutional treatment of the Old School of to-day, and then by comparing the average duration of the diseases with a similar number of cases of each disease treated by the administration of Homœopathic remedies alone, and the results will certainly show a greater saving of time to the patient under Homœopathy. The same is true in iritis and other diseases of the eye. In iritis the use of a mydriatic to overcome the mechanical effects of the adhesions is, of course, necessary under all modes of treatment, but, in addition to the employment of the mydriatic, the use of Homœopathic remedies will control an attack of iritis in from one to ten days earlier than by any other method of treatment; or, instead of using narcotics to control the severe pains of iritis, let one but see the effects of the properly selected Homœopathic remedy in relieving those pains in a few cases, and any unprejudiced observer must necessarily be convinced of the value of Homœopathy in eye diseases. As *Homœopathic* oculists and aurists, we do not claim to cure *all* diseases of the eye or ear by the administration of the Homœopathic remedy alone. Not one member of our ranks would think of treating an iritis with-

out a mydriatic, glaucoma without a myotic or an iridectomy, matured cataract without extraction, or mastoid disease without opening the mastoid; but as scientific men, as well as Homœopathic physicians, we claim it to be our right, privilege, and *duty* to employ all other scientific methods used by any school for the safe and speedy cure of our patient. We base our claims of superiority as *Homœopathic* oculists and aurists on the fact that in addition to *all* other scientific methods for the prevention of blindness and deafness, we employ the only scientific law for the administration of drugs.

We must also at this time again deplore the fact that our knowledge of the action of drugs upon the healthy eye and ear is still so limited, and must emphasize the necessity, in order to perfect our materia medica in this department, of thorough examination of the eye and ear by competent specialists in all future provings, both before, during and after the proving. Take for example the symptom of dimness of vision which we find recorded as existing in the provings of 209 different drugs, or vision lost in 121 drugs. Now how can these symptoms be of the slightest possible value in any given case when we know that there are over 100 different diseases of the eye in which there may be more or less dimness of vision. To be sure we have found clinically that Kali bich. is the remedy in the dimness of vision of descemetitis, Gelsem. in serous iritis, Bellad. and Duboisia in retinitis, Aurum mur. and Kali iod. in choroiditis, etc. We believe that these drugs, if given to a person in health, will produce pathological changes in the eye that will result in some impairment of vision, but with one exception we know of no proving where pathological changes have been seen during the proving by a competent oculist, merely because the eyes have not been under the careful examination they should have been. So with the symptom, hearing impaired, which occurs under 109 different drugs, or hearing lost which is found under 61 drugs. How have these remedies caused this deafness? By their action on the membrana tympani, the middle or internal ear or upon the auditory nerve itself? In this direction there lies a great field for future investigation and the path leading to a more exact and more scientific administration of drugs for the various diseases of the eye and ear. We trust that hereafter no proving of a new drug or reproving of an old one will be made except under the direction or examination by the oculist and aurist as well as by the other specialists in medicine.

At the present day much is being said and written of the overdoing of specialties in medicine, and that the specialist is crowding out the general practitioner. Representing as I do one of the specialists, I desire at this time to enter my protest against this popular clamor. Let one halt for a moment and look around at the other departments of science, arts, mechanics, etc., and he will very quickly find that medicine is no more, if as much, subdivided into specialties as are the many other professions. I can no better illustrate the tendency of the age in this respect than by a brief quotation from Mr. Grant Allen who in an appreciative article on "Specialists in Science," gives a bit of a conversation with Bates of the Amazons which illustrates the modern tendency towards specialization. Said that scientist: "When I was a young man I wanted to be a naturalist; but very soon I saw the days of naturalists were past and that if I wanted to do anything, I must specialize. I must be an entomologist. A little later I saw the days of entomologists, as such, were numbered, and that if I wanted to do anything, I must be a coleopterist. By and by, when I got to know more of my subject, I saw no man could understand all the coleoptera, and now I am content to try and find out something about the longicorn beetle." Specialization is a necessity, but it needs a broad foundation, or the individual runs into a very narrow type. Who are the men that are advancing the science of medicine in its various branches? Is it the general practitioner? No, it is the surgeon, the neurologist, the gynæcologist, the ophthalmologist, etc. The necessity for the oculist and aurist we believe will be fully demonstrated by the essays and discussions to be presented at the sessions of this section, as the scope of the work in this department has been so arranged and divided as to cover as much as possible of the subject within the limits set by the Congress. Much within the domain of ophthalmology and otology should and does fall within the scope of the general practitioner. Professor Helmholtz once said, "that if an optician were to send him an instrument with so many easily avoidable defects as the human eye has, he would feel bound to censure him severely." Many of these slight defects and the more external or superficial forms of inflammation of the eye should be treated by the family physician and could be were he to devote as much time and study to this branch as he does to the other specialties in medicine, but where is the specialist even, who can to-

day say that he knows *all* the hidden mysteries of sight and hearing? And yet this, the first-born of the specialties in medicine, is now nearly forty years old. If then, the life of these the smallest organs of the body cannot be absolutely solved in forty years, who can expect in one short lifetime to master all the functions of the human body? Therefore we say give us more and better specialists in all the departments of medicine.

OPHTHALMIC THERAPEUTICS.

By E. H. Linnell, M.D., Norwich, Conn.

It is quite unnecessary, as it would be inappropriate, for me to present to this audience, composed as it is of representative Homœopathic physicians gathered from all parts of the civilized world, any arguments to prove the superiority of Homœopathic therapeutics over all other methods of healing. On the other hand, in this Columbian year, when all religious, educational, and scientific bodies are holding congresses, it is fitting that we should show to the world what Homœopathy has accomplished, and what it has to offer in contrast to Old-School teaching and practice.

It has devolved upon me to prepare a review of Homœopathic therapeutics in our special department, that of ophthalmology. So much has been written lately upon this topic, that it is with diffidence I venture to discuss a subject so ably treated by others, and I crave your indulgence if much that I have to say seems trite.

This is an age of exact scientific investigation. Men demand facts, and not theories; and I propose to give you the facts of ophthalmic therapeutics, Homœopathically considered, as compared with the treatment of the Old School.

It will not be inappropriate on this occasion for us to inquire what Homœopathy has accomplished in this special department, and whether it offers any advantages over other methods. If Homœopathy is, as the illustrious Dunham expressed it, the "*Science* of Therapeutics," then the Homœopathic specialist should be more scientific in the choice and application of curative agents than one who relies simply upon traditional, or physiological and empirical uses of drugs; and he should be correspondingly more successful. Does experience demonstrate this to be true? Our first duty is to our patients; our first motive is to cure them as speedily and as surely as possible. We should "prove all things, and hold fast that which is good." We want the best. Is Homœopathy the best? If not,

let us know it. And if it is, then let us demonstrate it so conclusively as to compel universal acknowledgment. It would be interesting and instructive to compare the results of the treatment of an equal number of cases of a given disease under the two systems, were reliable statistics available. We can contrast the ordinary treatment of eye-disease, as recommended in recent Old-School treatises, with the Homœopathic treatment outlined in the latest and best work on the subject—Dr. Norton's *Ophthalmic Diseases and Therapeutics.*

That we may intelligently discuss the question, let us first clearly understand what we mean by Homœopathic therapeutics as applied to ophthalmic affections. If we mean only the application of those drugs for the cure of morbid conditions which have actually caused similar functional disturbances and pathological lesions, then our resources are very much restricted; although in this limited interpretation of the subject, we have a number of valuable remedies. There are several reasons why our armamentarium is so much curtailed in this particular. In the first place, the records of poisoning furnish us with but few specific effects upon the eye, and our provings have not, in many cases, been pushed to the extent of producing actual tissue changes. But the most important reason is the lack of skilled and accurate observation, which is apparent in the pathogeneses of drugs. Most recorded eye-symptoms are subjective, and frequently unreliable, because not rightly interpreted. Had every prover been subjected to a careful examination by a competent and experienced oculist, before and after a proving, and the condition of refraction, ophthalmoscopic appearance of fundus, etc., been accurately recorded, the provings would have been infinitely more valuable to the specialist. The proving of Duboisin by Dr. Deady, published in the *Trans. of Am. Hom. O. and O. Society*, 1880, is a model worthy of imitation, although we cannot help wishing that the eyes of the provers had been previously examined, and conditions noted. Eye-diseases are rarely purely local, especially those serious affections which endanger vision; but are usually the result of some systemic disorder, and require constitutional treatment. Similarly drugs do not affect the eye alone, but produce, in connection with eye-symptoms, indications of disturbance of remote organs and general constitutional effects. If, then, certain morbid conditions of the eye disappear under the exhibition of a remedy prescribed

in strict conformity with the law of "Similia," for general constitutional symptoms or for affections of other organs, is it not fair and logical to accept these eye-symptoms as reliable indications for that remedy in another similar case, even if the constitutional symptoms of the first case are lacking? Is it not also probable that such a remedy, if fully proved in suitable doses, would cause the symptoms which it cures; and is not a *verified* symptomatology, acquired in the way suggested, a logical basis of Homœopathic therapeutics?

With this understanding of our topic, and I think it is a reasonable one, we have an extensive armamentarium of specific remedies. Allen and Norton's *Ophthalmic Therapeutics* was compiled in this way from verified and trustworthy symptoms, and we owe an immense debt of gratitude to the authors and to the other faithful and skillful surgeons of the New York Ophthalmic Hospital, to whose labors we are largely indebted for the development of the resources of our school in this special department. In the possession of these specific remedies the Homœopathic oculist has a great advantage over one of the Old School; but a *thorough* knowledge of drug effects upon the *whole system*, is a requisite for successful prescribing, as well as a familiarity with *general diseases*. We cannot successfully prescribe for eye-symptoms alone, nor can we ignore the relationship between ocular affections and diseases of other organs, or the frequent dependence of eye-diseases upon constitutional dyscrasiæ. For this reason an extended experience in general practice is very desirable before undertaking special work. The Homœopathic oculist, with these added means of cure at his command,—I say "*added*," for of course all resources of the healing art, from whatever source, are his to choose or to refuse,—can achieve results impossible without them. When all mechanical, local, and surgical measures are powerless, the suitable Homœopathic remedy will often preserve or restore sight and cure disease, when Old-School medicine is confessedly of no avail. Many an operation can be obviated, and many an unfortunate sequence of operation be averted. Pain, in the large majority of cases, can be controlled without the use of narcotics, with their attendant unpleasant and sometimes dangerous effects, and the course of many diseases be materially shortened.

I promised to give you facts rather than theories, and in order to prove the truth of my assertions, let us critically examine and com-

pare the therapeutic measures of the two schools in various affections. First, What does Old-School medicine offer for the relief and cure of eye diseases?

In order to answer this question intelligently, I have carefully read and reviewed a recent text-book by a recognized authority—Noyes's *Diseases of the Eye*—and noted every remedy recommended, with the indications for its employment. I have, of course, not noted local or surgical treatment, or the correction of refractive or muscular errors. The purely therapeutic resources, as therein outlined, comprise forty-three remedies, almost all of which are prescribed upon the most general principles, and where specific indications are given, they are most meagre in contrast with our methods of careful individualization. To particularize: "appropriate" general or constitutional treatment, such as alteratives, derivatives, stimulants, etc., are sometimes advised without explicit mention, and in other cases Cod-liver oil, Iron, Quinine, Arsenic, Malt and Hypophosphites, especially in anæmic debility, scrofulosis, etc.

The following table shows a list of other medicines mentioned, and the diseases for which they are recommended.

Diuretics and Purgatives, especially Rhubarb and Soda, Sal soda, Rochelle salts.—Phlyctenular keratitis, scleritis rheumatica, iritis, cataract, retinitis (apoplectica and albuminurica), amotio-retinæ, neuritis, neuro-retinitis.

Salicylate of Soda, Lithates, Liquor potassæ and other alkalies.—Rheumatic and gouty affections generally, particularly in iritis, neuritis, neuro-retinitis, periostitis, tenonitis, acute phlegmonous eczema of the lids, staphyloma of the sclera.

Antifebrine, Antipyrine, Sulphonal, Morphia, Opium, Bromides, Chloral and Phenacetine.—To relieve pain.

Iodide of potash.—Spasm of orbicularis, episcleritis, iritis, to arrest development of cataract, to clear opacities of the vitreous, choroiditis, retinitis apoplectica et syphilitica, neuritis, neuro-retinitis, retrobulbar neuritis, atrophy of the optic nerve, periostitis orbitæ, tenonitis, generally in syphilitic and rheumatic affections.

Mercury.—Syphilitic affections, diphtheritic conjunctivitis, interstitial keratitis, iritis, opacities of vitreous, sympathetic ophthalmia, choroiditis, acute and chronic, retinitis albuminurica, neuritis, neuro-retinitis, atrophy of the optic nerve.

Arsenic, Zinc, Argentum nitricum, Phosphorus.—Various affections of the nerve and retina.

Strychnia.—Neuro-paralytic ophthalmia, cataract, retinitis pigmentosa, amblyopia, amaurosis (genuine and hysterical), exophthalmic goitre.

Digitalis, Phosphoric acid, Ergot, Atropia, Strophanthus, Tonics and Sedatives.—Exophthalmic goitre.

Digitalis.—Diseases characterized by feeble circulation and weak heart, such as ischæmia retinæ, retinitis albuminurica, with vascular degeneration (also calling for Carbonate of ammonia), amblyopia, amaurosis.

Muriate of pilocarpine, Infusion of jaborandi.—Amotio-retinæ, staphyloma of sclera (in gouty patients), iritis, sympathetic ophthalmia, acute choroiditis, neuritis, neuro-retinitis.

Quinine.—To check threatened inflammation after cataract operations, cellulitis, iritis.

Aconite, Gelsemium, Conium.—Blepharospasm.

Bromo-caffein.—Hysterical amblyopia.

Nitro-glycerine in $\frac{1}{100}$ *gr. doses.*—Retinitis apoplectica with high arterial tension.

Mineral acids.—Cellulitis orbitæ.

Turpentine, Colchicum.—Iritis.

Phosphoric acids, Phosphates.—Cataract.

I believe this to be a fair and impartial *résumé* of ophthalmic therapeutics from the Old-School point of view. It is not difficult to recognize the unconscious Homœopathicity of many of their more specific applications; at least, we use the same drugs in attenuated doses, with success, in the same diseases, only studying the particular and minute indications for them according to the law of "similia." The essential difference between their therapeutics and ours is noticed here as in all departments of medicine, viz., they prescribe for diseases while we prescribe for the individual. Which is the more scientific?

In contrast with this array, I will simply call attention to the detailed and specific symptomatology of the one hundred and forty remedies mentioned in the latest and best Homœopathic treatise, that of Dr. Norton, already mentioned. While this list does not comprise all the resources of our school—for almost every remedy in the Materia Medica may be found curative of eye diseases under appropriate conditions—I offer it as a fair exponent of Homœopathic treatment in contrast with the *résumé* of Old-School therapeutics just

given. It is not a compilation of theoretical and empirical indications, but is made up of thoroughly trustworthy and, for the most part, *verified* indications. Experience has demonstrated them to be reliable guides for the choice of the remedy. But it may be argued that this is mere assumption on my part. It certainly would be presumptuous to expect any one to accept such an assertion without satisfactory evidence, and while I cannot demonstrate to the skeptic here and now the truth of my statement by adducing overwhelming evidence in proof of the value of remedies prescribed upon such a basis, yet I can affirm what the Homœopathic treatment of eye diseases has accomplished, what it is accomplishing every day in hospital and private practice, and what can be demonstrated to the satisfaction of any fair-minded investigator who cares to give the matter sufficient time and thought.

What, then, are some of the *verities* of Homœopathic ocular therapeutics?

I.—The action of constitutional remedies, such as Ars., Graph., Calc., Sulph., Nat. mur. and Sil. in hereditary or acquired conditions of malnutrition and in the various dyscrasiæ.

II.—The action of Acon., Bell., Apis, Verat. vir. and Rhus in controlling inflammatory conditions, erysipelas, cellulitis, etc.

III.—The action of Hepar, Sil. and Rhus in suppuration, of Gels. in serous, and of Bry. in plastic exudations.

IV.—The action of Arnica, Crotalus, Ham., Lach. and Ledum in arresting and absorbing hæmorrhages.

V.—The action of Sil., Calc., Aurum, Kali iodide, etc., in diseases of bone and orbit, morbid growths, periostitis, etc.

VI.—The action of Amyl nit., Ferrum, Lycopus, Spongia, Nat. mur. and Ars. in exophthalmic goitre.

VII.—The action of Puls., Apis, Alum., Merc., Ars., Euphrasia, Argent. nit., Rhus, etc., in catarrhal conjunctivitis, ophthalmia neonatorum, specific blenorrhœa, etc., arresting inflammation, moderating discharge, preventing corneal complications and averting many cases of blindness.

VIII.—The action of Aurum, the Iodides, Baryta, the Kalis, Sil., Graph., Hepar and Merc. on corneal tissue, healing ulcers, resolving infiltrations, clearing nebulae, and thus often avoiding minor operations, such as scraping of ulcers and phlyctenules, the use of caustics and the galvanic cautery, and of paracentesis.

IX.—The influence of Merc., Bry., Cedron, Rhus, Clem., Col., Spigelia and Potash in iritis, shortening very much its course under Old-School methods, averting sequelæ and rendering narcotics unnecessary.

X.—The undoubted influence of Caust., Sulph., Sepia, Phos., Sil. and Iodoform in arresting and delaying the development of cataract, and even clearing opacities of cortex.

XI.—The influence of Bell., Bry., Gels., Aurum, Phos., Merc., Kali mur. and Kali iod. in various forms of choroiditis and retinitis.

XII.—The beneficial effects of many remedies, especially of Nux and Phos., in inflammatory affections of the optic nerve and in atrophic conditions, cerebral and spinal.

These are some of the solid facts of Homœopathic therapeutics which cannot be controverted.

As our knowledge of Materia Medica increases, especially as the pathogeneses of drugs are more accurately and scientifically developed, our success will be measurably increased. There is some evidence as to the efficiency of Gels., Bry., Col. and other remedies in glaucoma, but the well-known influence of eserine and iridectomy makes it unjustifiable to withhold them in the majority of cases. The symptomatology of Osmium gives us a very suggestive picture of glaucoma. It ought to be helpful, though I am not conversant with any positive clinical evidence in proof of its efficacy. When a careful record of the tension, of the acuity and of the field of vision and of the ophthalmoscopic appearance of the fundus appears in our provings, then we may hope to dispense with myotics and iridectomy in the treatment of this disease.

The influence of some of our remedies in checking the development of cataract, and of materially improving vision by the resolution of cortical opacities has been abundantly proved, and affords a striking instance of the superiority of Homœopathic ocular therapeutics. Where do we find any such results from Old-School treatment as those published in recent years by some of our specialists of recognized ability, whose statements are trustworthy, and whose diagnoses are beyond question? The experience of Dr. Wm. R. King,* of Washington, with Iodoform is especially noteworthy.

The treatment of cataract with remedies must, of course, rest upon

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* See *Journal of O., O. and L.*, April, 1891.

a constitutional basis. Eye-symptoms alone do not afford sufficient data for the choice of a drug. The underlying condition is the important point to consider.

An interesting illustration of the value of such a method of prescribing, and also of the fact previously noted, that a remedy may cure an eye-affection when indicated by constitutional symptoms, even though its pathogenesis contains nothing to indicate its special action on the eye, is afforded by a case of ptosis cured with Bromine 6x by Dr. Bissel, of Rochester, reported in the *Journal of O., O. and L.*, for October, 1889. Bromine was selected on account of diarrhœa, eructations, pain like needles at the epigastrium and physometra.

Bisulphide of carbon is worthy of trial in retrobulbar neuritis. Cases of poisoning suggest it Homœopathically to this affection. It has produced in several cases, "diminution of vision, central scotoma, vision better in the evening, loss of appreciation of color, central scotoma for colors, and narrowing of eccentric field," without ophthalmic changes in the fundus oculi. Hirshberg described in one case "an alteration of the macula characterized by the presence of whitish nodules." These visual disturbances are associated with nervous symptoms, such as muscular weakness of the limbs, cramps in the legs and abdomen, diminution of hearing and headache.*

Malignant growths of the eye and lids have seldom been materially influenced by remedies, yet we now and then see a gleam of light in this direction which encourages us to hope for better results in the future. Such hints from accurate observers should be carefully noted and remembered, and therefore I desire to call your attention to the report of a case of sarcoma by Dr. W. S. Searle, of Brooklyn.† A blind eye had been removed, and microscopical examination demonstrated the correctness of a previous diagnosis by Dr. H. Knapp, viz., spindle-celled sarcoma of the choroid. Ten days after removal, a secondary growth "of the size of a chestnut" was removed from the orbit, and Phos. and Tarantula cubensis were prescribed. The former was chosen on account of general constitutional indications, and the latter from its reputation in inflammatory affections of connective tissue, especially in boils and carbuncles. After their use there was no return for nine months.

* See article by H. H. Crippen in *O., O. and L.*, April, 1891.

† *Journal of O., O. and L.*, February, 1892.

Then the growth again returned to a slight extent, but under a renewal of the former prescription the nodule shrivelled and dropped off within a week, and the doctor wrote me recently that there had been no recurrence of the disease up to the present time, a period of two years since the second operation.

These remedies are worthy of trial in similar cases, and I would also remind you of the published experience of the late Dr. George S. Norton and of Dr. French in the treatment of glioma retinæ with Ceanthus Americanus, the fluid extract of red clover blossoms.*

The value of Cinnabar as a remedy for ciliary neuralgias has been often demonstrated, where the indication of "pain extending from the inner canthus around the brow" is present, but we owe to Dr. H. C. French a confirmation of the following indication for its employment, viz., "a full, heavy feeling in the whole head, temporarily lessened by pressure." "Dull pain in the forehead over the eyes, increased by use." "Shooting pains in the forehead." "Sticking and itching in both canthi and in the forehead." The patient had been under Old-School treatment for two years, and Dr. French gave him great relief in a few hours, and cured him in less than three weeks with Cinnabar.

The curative influence of Agaricus in spasmodic affections of the lids and ocular muscles has long been recognized, but its influence in amaurosis and hysterical amblyopia was first suggested to me by an article by Dr. Rounds.† Some slight impairment of vision is suggested in the proving of the remedy, but that a total blindness of both eyes—"only slight perception of strong light remaining"—should be entirely cured, and perfect vision restored after the patient had been blind for several years, is certainly surprising and worthy of note. The sight of the right eye was suddenly lost after a blow upon the head four years before treatment was commenced, and that of the left eye as suddenly and completely failed after exposure to rain. For two years she could not tell night from day. The only other treatment employed was galvanism, and as this was used without avail for two months before prescribing Agaricus it seems reasonable to attribute the recovery in large measure to the medicine, although electricity was continued at irregular and increasing intervals during the time of treatment. Nystagmus, nictitation and other

* See *O., O. and L.*, April, 1890, and *Trans. Am. Inst*, 1884.

† See *Journal of O., O. and L.*, October, 1891.

nervous and hysterical symptoms led to the choice. The ophthalmoscopic examination was negative. Fifteen drops of the tincture of Agaricus were taken daily in divided doses for a period of eight months, when the patient was discharged with perfect vision in each eye, and entirely free from nystagmus, etc. She has since earned her own living as a stenographer and typewriter.

Experience has repeatedly proved the efficacy of Gelsemium in various diseases of the eye, especially where serous exudation exists, and in paretic affections of the muscles, but its Homœopathicity to amaurotic affections is suggested by the following observation of Dr. W. A. Phillips. In a certain patient, 5 gtts. doses of the tincture invariably produced the characteristic symptoms of giddiness, headache and heaviness of the lids, followed by almost total loss of vision. At one time the accommodation failed first, while at another the sensibility to retinal impressions seemed to precede the loss of adjustment. In forty minutes after the five drops were taken the vision was reduced to $\frac{3}{200}$. It could not be improved by lenses, and this diminution continued from five to fifteen minutes. Normal vision returned in from one-half to two hours. No ophthalmoscopic changes were observed.*

Paris quadrifolia is a valuable remedy in certain cases of asthenopia. The sensation "as if the eyes were being drawn back into the head by cords" is a reliable indication for its employment, and led the writer to select it, and to effect a gratifying cure of chronic headache. Dr. French cured with Paris a paralysis of the external rectus where this symptom was present. He also emphasizes the following as trustworthy guides for its use, viz., "inability to fix the eyes steadily upon anything; eyes seem swollen, as if their orbits were too small, so that the eyes could not be easily moved."†

Kalmia is helpful in certain cases of asthenopia. Dr. Boyle has had gratifying success with it in episcleritis and tenonitis,‡ where the patient complained of "soreness of the eyeballs to touch and motion." "Injection of the conjunctiva, chemosis around the cornea." "Feeling of stiffness of the muscles."

The pathogenesis of Cannabis sat. and Cannabis ind. exhibit a striking similarity to pterygium, and they ought to be curative of

* See *O. and O.*, April 1, 1890.

† See *Journal of O., O. and L.*, January, 1889.

‡ See *Trans. N. Y. State Soc.*, 1891.

that condition. They have been curative in vascular conditions of the cornea, and Dr. Wanstall cured with Cannabis ind. a case of pustular keratitis, with pterygium-like injection of the conjunctiva.*

Chrysophanic acid should be remembered in cases of chronic ciliary blepharitis, especially in scrofulous, ill-nonrished children. The writer on one occasion prescribed an ointment composed of eight grains of the acid to an ounce of vaseline, to be cautiously used on the edges of the lids. The patient, thinking if a little was good a great deal was better, applied it freely over all the lids and conjunctiva. A very violent inflammation followed, but the blepharitis was permanently cured.

The Homœopathicity of Colocynth to iritis characterized by burning, sticking, cutting pains, extending from the eyes into the head, increased at night and by stooping, lessened by pressure and walking in a warm room, was exemplified by an experience of the writer, where the disease, if not primarily caused as there seemed reason to believe, was without doubt markedly aggravated by the use of a hair wash containing Colocynth.†

The successful use of Hypericum in injuries of parts rich in nerves, and in pains from old cicatrices, led Dr. Moffat to prescribe it with benefit in pain arising from anterior synechiae after the patient had suffered several years.

In conclusion, let me again emphasize the need of careful examinations of the eyes of persons, and the accurate record of variations of tension, of visual disturbances, of muscular conditions, of ophthalmoscopic changes and so forth, by skilled specialists, in order that subjective symptoms may be correctly interpreted, and our symptomatology be more scientific and reliable. Every committee of provers, every Materia Medica laboratory should have a competent oculist.

Let me urge upon our specialists the duty of careful prescribing, of painstaking detailed records, and of publication of successes and of *failures* with remedies Homœopathically prescribed, that we may attain greater accuracy in prescribing, that our knowledge of the positive effects of drugs may be extended, and that we may achieve greater success in the treatment of eye-affections according to the law of "Similia Similibus Curantur," and relegate operative measures

* See Norton's *Ophthalmic Diseases and Therapeutics.*

† See *North Am. Journal of Homœopathy*, 1887.

and local treatment more and more to positions of a secondary importance. The day is surely coming when Homœopathy will be universally recognized as the "Science of Therapeutics," and when the Homœopathic specialist will be the exponent of the highest degree of scientific and skillful treatment.

Discussion.

J. H. Buffum, M.D.: Dr. Linnell has presented to the Congress an able epitome of the present status of ophthalmic therapeutics, which must carry with it the conviction of truth. Perhaps, in no department of medicine have such advances been made in diagnosis, prognosis, and pathology, as in that of ophthalmology, until it has now become one of the most exact and scientific in the domain of the healing art.

Small as the organs of sight are, as compared with other organs of the human body, their relation to the whole animal economy is such as to carry with it need for a full knowledge of not only the anatomy, physiology, and pathology, of all organs, but also their dependence, in health or disease, to the various affections of the eye. On the other hand, the ophthalmologist has been able to determine the exact relation which certain conditions of the eye, either physiological or pathological, bear to various diseases which are termed reflex and general.

As Homœopathic ophthalmologists, we should carry our Homœopathy into our practice, not only as followers of the wisdom and philosophy which emanated from Hahnemann, who gave us a universal law of cure, but also, because we owe it to our clients who confide their cases to us and expect to be cured homœopathically, primarily, and secondarily only, when we have failed from a want of knowledge of our *Materia Medica Pura*.

The ophthalmic practitioner of our school has had, until the last few years, but little to aid or encourage him in his adherence to the tenets of his faith, owing to the fact that the basis of his knowledge of drugs in their active relation to eye diseases has been uncertain, as too often the pathogenesis, as set forth in the provings of the remedies was found thoroughly unreliable when applied to the treatment of the eye.

Hence, the older ophthalmic surgeons of our school have had to acquire from close study and observation of the clinical effects of our drugs, a system of ophthalmic therapeutics derived from our knowledge of our Materia Medica, and their own clinical observation, which is now rapidly being augmented by the increased number of workers in this department. Eventually, in the coming years, when the true laborers in the field of Homœopathic ocular therapy have brought in the harvest of pathogenetic, clinical, and curative

symptoms, we shall find, when the grain is separated from the chaff, that but little remains to desire, save the proper application of this accumulated knowledge to the scientific Homœopathic cure of all ophthalmic diseases.

It is difficult to supplement the careful *résumé* of the verified action and indications of the Homœopathic remedies which have so ably been demonstrated in the paper which is before us for discussion. Dr. Linnell has, with the utmost care, culled from our literature the most valuable verifications of Homœopathy as applied to the treatment of ocular diseases. It remains, then, only for me to add what may have come to my knowledge as a result of my own individual experience and observation in ophthalmic practice; amplifying here and there, and presenting perhaps, now and then, a grain of pure gold, which years of study and observation have enabled me to separate from the dross which surrounded it.

The poverty of the armamentarium medicum of the Old-School in its application to ocular therapeutics is manifested, not so much in its lessened number of drugs for internal medication, as in the want of specific indications for their use. The richness of our drug armament stands out in glittering contrast, not perhaps by the greater number of remedies, but by the knowledge of our Homœopathic law which enables us to prescribe these drugs with an assurance of the curative results which inevitably must follow their proper administration.

It is not necessary to discuss seriatim the list of verities of Homœopathic ocular therapeutics which Dr. Linnell has presented, as they are no longer in doubt. We should all endeavor, as soon as possible, to increase their number by adding to those mentioned others rich in possibilities, but which yet lack that confirmation which must come from repeated trials.

In the list presented I desire to emphasize the actions of Homœopathic so-called constitutional remedies in lessening and dissipating the various dyscrasias mentioned, and thus enabling us to cure the alternate effects as exhibited in the eye.

The actions of those remedies mentioned as controlling inflammatory effects of the eye, we all daily prove the truth of in our practice.

In reference to the action of Rhus tox. in promoting, controlling, and limiting various traumatic and surgical inflammations, perhaps little need be said, but for Hepar sulph. which has exhibited such marvellous action in controlling, limiting, and absorbing pus within the eye, too much praise cannot be given. With these two remedies eyesight and eyeball have been saved time and again, when no other known treatment could possibly have controlled the inflammation, lessened the pain, saved tissue, and caused the absorption of the products of inflammatory attacks. To watch the action of either,

when indicated in these affections of the eye makes one feel that our remedies have an action only short of the miraculous.

In iritis the action of Terebinth, which, in the Old School, finds a place of value, is with us too often neglected, as, like Asafœtida, it has a specific action upon the inflamed iris, and both not only lessen the ciliary neuralgia but shorten and cure the attack.

In controlling the inflammatory and degenerative changes in the lens which result in cataract, the action of our remedies presents often in my experience the further proof of the Homœopathic law of cure.

In the lens, as well as in the cornea, iris, vitreous, retina, and choroid, we can watch from day to day the limiting, absorption, and sight-restoring effects of our remedies.

Glaucoma, when presenting a mechanical obstruction of the excretion of the fluids of the eye, cannot come under the domain of medicine; but for those glaucomatous conditions which are dependent upon the hypersecretions resulting from neurotic irritations, the remedies mentioned by Dr. Linnell often afford us brilliant results. In simple non-inflammatory glaucoma of chronic type, Sulphur, Nux vomica, and Phosphorus have controlled the disease and saved the vision in cases where neither iridectomy, sclerotomy, or myotomy had been allowed, and also in cases where some or all of these operations had been made without control of this sight-destroying disease.

In addition to those that have been mentioned in the paper, there are some affections of the eye and the therapeutic means for their relief to which I desire to call attention as exhibiting the desired action of our remedies.

Hyperæmia of the retina, while usually symptomatic, is, I believe, more often idiopathic than we are inclined to think. While this condition is difficult of diagnosis, owing to the variableness of the circulation of the retina within physiological limits of the individuals, and in cases where such immediate causes as refractive errors, foreign bodies, or inflammation of the contignous tissues of the choroid and iris have been excluded, we are justified in making such a diagnosis. I find that taking the increased capillary circulation of the optic disk as an indication, rather than that of the retinal vessels, together with the subjective symptoms of asthenopia, a safe guide to the diagnosis of a condition which often presents a series of symptoms extremely annoying to the patient and often difficult of relief, unless we find in such remedies as Belladonna, Cactus, Cimicifuga, Duboisia, Amyl nit., and Phosphorus the similimum.

Cases of temporary amblyopia which arise from spasm of the retinal arteries or result from vaso-motor irritation of the cerebro-retinal circulation, and thus temporarily disturb the nutrition of the optic nerve and retina and destroy its function, more fre-

quently come to the notice of the general practitioner than to the ophthalmologist.

Such amblyopias, while often temporary and symptomatic of the cephalalgia which follows, sometimes tend to be persistent, and even when the amblyopia has disappeared we may find scotomas, which become sources of discomfort or causes of subjective symptoms, which make difficult the diagnosis of the eye condition.

In these cases, where there is found a migraine history, recent or remote, there are three remedies which cover a multitude of discomforting symptoms, namely, Gelsemium, Physostigma, and Strychnia phos.

For the amblyopia which precedes the attacks of headache, and which itself is often preceded by symptoms, more or less marked, of irritation of the retina, perhaps no remedy is more valuable than Amyl nitrite by inhalation, which, while shortening the attack as far as the disturbance of the vision is concerned, yet lessens not the tendency to recurrence nor removes the cause. As an example of what may be accomplished by remedies which, as far as we know, have shown in their pathogenesis no direct action upon such conditions yet exhibit their curative powers in a remarkable degree, I take from my case-book the following record of Miss P., æt. 23, who consulted me in 1888, with a history of temporary amblyopia, which usually occurred only in the right eye, but occasionally in the left, the attacks coming on in the morning after breakfast or on awakening, if she had suffered from insomnia. During the years before consulting me she had had six attacks, whose duration lasted from an hour to four or five. At the time I saw her a central scotoma of the right eye was evident, but a diagnosis of circulatory changes in the eye was doubtful. In the inception of the attack, a point of light was observed by her on the temporal side, which increased until it became a wave of light. In some of the attacks the waving of the light became rapid and caused vertigo. The attacks were modified by lying down. Her eyes were emmetropic and the vision normal. Has no special headaches. Bryonia was prescribed, and there was no return of the trouble for a year, when she again had a recurrence of the trouble, and came for some more of the remedy. In the four years since there has been no return of the trouble.

Some sixteen years ago, after reading the experience of Bell and Kühne in their efforts to demonstrate the retinal purple, I was impressed with the fact that Muscavine and Pilocarpine seemed to have the peculiar property of increasing the secretions of the light discoloring matter which is formed about the base of the rods of the retina. Acting upon the suggestions thus presented by the physiological provings of these drugs, I have used them for many years with success in cases of amblyopia, where I have been able to determine by exclusion of other causes that the deficient vision was de-

pendent upon a probable functional derangement of the retina and optic nerve. While I have already reported the good results following the administration of Agaricus and Jaborandi in restoring the vision in many cases of what might be termed torpor-retinæ or functional anæsthesia, I have also observed that Agaricus has a curative result in cases of hyperæsthesia retinæ. In regard to the action of Agaricus in optic nerve atrophy, I regret to say that I have been unable to get an improvement in the vision from its use. Some cases of toxic amblyopia arising from nicotine poisoning, where the atrophy was only partial, have certainly been benefited by it. Such remedies as Gelsemium, Ignatia, Phosphorus, Sulphur, and many others might also be mentioned as having directly or indirectly a marked action in improving the functional activity of the retina. In hyperæsthetic conditions of the retina, where all local, refractive, and reflex causes have been removed, the action of the Homœopathic attenuated drugs, such as Macrotin, Hyoscyamine, Atropine, Conium, Agaricus, Nux vomica, and Ignatia, are often marvellous in the rapidity of their action. The results obtained from the proper administration of the indicated remedies in these cases where the failure from the more general treatment of the opposing school of medicine is common, are the more remarkable, and tend to give one new effort and a desire to place again and again fresh laurels upon the already well crowned head of Hahnemann.

The results obtained by the Homœopathic administration of Physostigma, Jaborandi, Gelsemium, Agaricus, in cases of spasm of the accommodation associated with refractive errors, have enabled me for the last ten years to do away with the use of Atropia, Homatropin, Hyoscyamine, and other mydriatics which are commonly considered necessary for the paralysis of the accomodation in the prescription of glasses. It has been my experience that the results of my prescriptions for correcting lenses have been much more satisfactory than when I have used mydriatics, and where the reflex symptoms arising from eye-strain, such as neuralgia and headaches and other more remote neuroses, were often relieved before the glasses were prescribed.

Again, it may be said that these and other remedies relieve the eye strain of both the intrinsic and extrinsic muscles of the ball, as reflexes, when the total optical defect has been corrected by the prescription of glasses, based upon the supposed complete paralysis of the accomodation under Atropia or some other drug similar in action.

In the insufficiencies of the recti muscles, whether the cases exhibit an exophoria, esophoria, or a hyperphoria, we find that a close study of our cases with the prescription of such remedies as Argent. nit., Nat. mur., Gels., Senega, Physostigma, Agaricus, Mercurius, and Phosphorus, we are able time and again not only to relieve the

discomfort attendant upon the muscular deficiency, but also to avoid the aftermath of graduated tenotomies which daily confront us in search of relief which even our Homœopathic law cannot repair. Thanks to the increasing intelligence of the medical profession the fad of to-day, whether in our department of medicine or in any other, is dead to-morrow, but while our colleagues in general medicine and surgery may bury their dead, ours too often with practically useless organs of sight confront us with their tale of woe in their tenotomized and be-prismed eyes.

Careful study, the painstaking prescription of the Homœopathic remedy in our department of medicine, not only gives us the satisfaction of cure where other methods have failed, but also enables us to thus make a more enduring monument to Hahnemann than that of bronze which we design to erect to him.

F. Parke Lewis, M.D.: *Mr. President, Ladies and Gentlemen:* Everything that Dr. Linnell writes is written with care. I never yet have seen anything from his pen that was not truly worth reading. It follows, as a matter of course, that the summary of the value of drugs which he has given us is one which has a very definite and distinct value. The thesis of this paper, however, is one in which in an interrogatory way he asks us if we may not accept. It is this: He says: "Knowing that certain constitutional symptoms are accompanied with morbid conditions, and having cured this condition by the exhibition of the similimum, are we not justified in saying that any subsequent case, in which the morbid condition of the eye alone appears, we may assume that had the drug in the proving been given long enough the condition of the eye would have disappeared, and that we may take that as a basis for subsequent prescriptions of that drug?" Can we? I wish I could believe absolutely that that were true, because it would give us a basis for the exhibition of our Homœopathic remedies, a very true and very sure one. In other words, if it were always possible to say that because certain conditions have been cured by the exhibition of a certain remedy, we may assume that when these conditions of the eye appear independent of the constitutional conditions that appear in the first place, that we will also cure that disease. I think we would have a certainty in the application of our Materia Medica that would be very desirable, a certainty in prescribing, which I am sorry to say I do not always feel, and I question whether we may accept in its entirety the thesis of Dr. Linnell's paper. The case he cites, for instance, of Dr. Bissel's, is, it seems to me, a classical one. Bromium was given for certain constitutional troubles, accompanied by ptosis—the ptosis disappeared. We had a definite Homœopathic prescription, followed by a cure; but are we justified in presuming that, should ptosis appear without these constitutional symptoms, Bromium is going to cure that ptosis? I do not believe that

we can always do that. The consequence is that we have in our Materia Medica a great many symptoms which we accept as verifications, about which, in my mind, there is question. Immensely valuable suggestions, immensely valuable to us in our prescriptions, but not symptoms upon which we can pin our faith with absolute reliance. For instance, I have frequently given Gelsemium in iritis, and have not cured my case; therefore I have concluded that Gelsemium is not the remedy for iritis. It may be, but it is not always. The reason I believe that we have such a small proportion of definite symptoms connected with the eye in our Materia Medica, is only partially due to the fact that we have not had skilled specialists to make examinations of these conditions; it is only partially due to that. I come more and more to believe that the eye is not, in a very large proportion of cases, directly and specifically acted upon by drugs administered internally. I wish to be understood in this matter. I am not in any degree under-estimating the immense value of Homœopathic therapeutics in diseases of the eyes; I am simply questioning the application of this therapeutics. I am by no means criticising the results which have been obtained in the hands of our careful prescribers. That those results have been obtained, I also have no doubt; but I do believe that a large proportion of the diseases of the eye (if we exclude traumatism, refractive and muscular troubles—I mean traumatism of bright sunlight on the retina)—are the results of diseases of some of the other organs of the system; some of the great organs of the nervous system, or of the circulatory system. And unless we take into account the power which each of these conditions may have upon the disease of the eye, I am inclined to think that we lessen rather than increase our knowledge of the therapeutic action of drugs upon the eye. I hope I make myself clear in that, because I have such an unbounded faith in Homœopathic remedies in diseases of the eye that I do not wish to be wrongly understood in the matter. But as to the methods we sometimes adopt in determining the action of drugs upon the eye, I think there is room for frequent error. It is unnecessary to talk to those who are thoroughly informed—as thoroughly informed as those are to whom I am speaking—in regard to the nature of diseases of the eye, and the necessity of exact diagnosis; and yet I believe that in the administration of drugs therapeutically, an exceedingly exact diagnosis must be made, otherwise we are apt to be led into error. To explain what I mean more particularly: I remember trying for a long time to treat a peculiar form of cataract (a dotted condition of the lens, which I have seen in several instances), and without any appreciable effect. I subsequently found that there was present in that case a refractive condition, which had been overlooked, a slight difference in the foci of the two eyes, and the correction of which absolutely corrected the whole difficulty. In

other words, it relieved the strain on the ciliary muscle, it relieved the nutrition of the eye, and the eye cleared in consequence. I don't mean to say that that kind of cataract comes inevitably as a result of muscular or ciliary strain, but I do mean to say that in a very large proportion of these cases the correction of muscular and of refractive errors will eliminate the necessity for the exhibition of internal medication.

I am very much interested in what Dr. Buffum has said in regard to the action of drugs in relieving and curing ciliary spasm. I was very much interested twelve or fifteen years ago when Dr. Woodyatt announced the value that he had obtained from Argentum nitricum in those troubles, possibly because I have not had opportunity of following those cases as I would like to; but I never have had the entirely satisfactory results in internal medication, in focal and refractive troubles, which others seem to have had. Where there is a muscular condition which is not benefited, I have almost always found those conditions return for further treatment.

THE REFRACTION OF THE EYE.

By Thomas M. Stewart, M.D., Cincinnati, O.

By invitation from the Chairman of the Section of Ophthalmology to prepare the paper on the general topic of "refraction" we are acquitted of any undue assumption in coming before you. While the chairman is thus responsible, both for our presence here and our topic, we must say that it would have been difficult to select a question in the whole range of ophthalmology more important than that of how to deal with errors of refraction, for, after all, this is the practical basis of the general topic which it is our privilege to discuss at this time.

To treat this subject satisfactorily two things are requisite:

The one is, an understanding of the conditions of accurate vision; the other, an understanding of the appliances for estimating the refraction of the eye. What, then, are the

Conditions of Accurate Vision?

Two conditions must be fulfilled in order to see an object distinctly.*

In the first place, an inverted but well-defined image of the object must be formed on the layer of the rods and cones of the retina. In the second place, the local irritation here excited must be conveyed to the fibres of the optic nerve, communicated to the brain, and again, in an inverted direction, projected outwards.

We may say, therefore, that every disturbance of vision depends upon a derangement in one of these two conditions, or both together. If the projection outward be deranged by disturbances in the retina, in the optic nerve, or in the brain, the affection belongs to the domain of amblyopia or amaurosis. If no image be formed, or if the image be distorted through diffusion of light in the eye, obscurities in the way of the radiation of light through the organ are the foundation

* *Refraction and Accommodation of the Eye.* Donders, London, 1864.

of the mischief. Finally, if the image of objects placed at the ordinary distances of distinct vision be not formed on the layer of rods and cones, or even if, through abnormal curvature of the surfaces of cornea or lens no defined image is on the whole produced, anomalies of refraction or of accommodation are developed.

In order, then, to proceed in some systematic manner to do justice to this subject in the light of modern methods and instruments, we will suppose that we have an eye in which vision is impaired. From the foregoing we have one of these three kinds of disturbance with which to deal. The opthalmoscope and the oblique illumination will at once show whether obscurity of the light refracting media or some pathological change in the nerve or retina be present or not. If such be not found, we may infer the existence of either amblyopia or of a disturbance in refraction and accommodation. If now with the aid of the different methods of estimating the refraction of the eye, perfectly defined vision can at no distance be obtained, the case is one of amblyopia. If, on the other hand, vision is clearly defined at one distance or another, we have to deal with an anomaly of refraction or accommodation.

It is understood that the anomalies of refraction are to be sought in the form and structure of the eye with the accommodation at rest. The anomalies of accommodation have their basis in the abnormal action of the internal and external muscular system, for accommodation and convergence are associated functions; neither is to be ignored if the best results are to be secured. In dealing with the anomalies of refraction we must take note of the

Appliances for Estimating the Refraction of the Eye.

In addition to the trial lenses and the ophthalmoscope, we now have the ophthalmometer and Dr. Lambert's discs of lenses for use in retinoscopy. The full consideration of these instruments, their range and application in the service for which they have been devised, would alone carry us far beyond the time appropriate for the presentation of the subject of this paper for your discussion.

The determination of the state of refraction by the glass giving the most distinct vision at twenty feet, with uniform illumination, is the method with intelligent patients, less open to objections than any other, the possibility of the physician's bias being likely to invite criticism in ophthalmoscopic and other objective tests.

But before we make use of any one or all of the appliances herein mentioned we must dispose of the subject of

Mydriatics.

The question, whether or not, the ciliary muscle of the eye should be paralyzed in estimating the refraction is still an open one. The reasons for this are many: first, the time taken to thoroughly suspend accommodation; second, the doubtful efficacy of Homatropine as a substitute for Atropine; thirdly, the questioned value of the ophthalmometer in measuring corneal astigmatism; fourthly, the questionable value of the direct and indirect ophthalmoscopic examinations.

To solve the question requires a knowledge of that which a mydriatic is supposed to do, together with the reasons and necessity for doing it; this knowledge must be supplemented by an apprehension of the relative merits of the different mydriatics, together with the principles, mathematical and optical, underlying the uses of the ophthalmometer and the ophthalmoscope.

It is fair to assume that a mydriatic exercises three functions: first, to paralyze the ciliary muscle, because accommodation is equivalent to increased refraction; secondly, to dilate the pupil, and hence to facilitate a thorough examination of the refractive media and the periphery of the eye ground; and thirdly, to place the eye at complete physiological rest, so that the lesions so commonly present as the result of eye-strain may subside—not alone, we take it, merely because there is physiological rest, but a distinct sedative influence exercised by the drug.

The following table, compiled from private and published records from 1888 to 1893, of 2000 eyes examined without mydriasis, and the ametropia thus found compared to the ametropia of the same eyes examined under full mydriasis, is an object-lesson relative to this question.

	Without Mydriasis. Per Cent.	With Mydriasis. Per Cent.
Emmetropia,	16½	1
Myopia,	9	4
Hyperopia,	10½	31½
Simple hyperopic astigmatism,	15½	5
" myopic "	23	2
Compound hyperopic "	10½	41
" myopic "	12	10
Mixed astigmatism,	3	5½
	100	100

Therefore, in answer to the question, is it necessary to paralyze the accommodation in order to prescribe the most suitable glasses, I answer, yes.

The second point for solution—the best agent to use for the purpose of paralyzing the accommodation—is also in dispute.

Hydrobromate of homatropine, because of its rapid action and transitory effect, is the favorite mydriatic for refractive purposes. Its efficiency is questioned; ophthalmologists of equal eminence hold diametrical opinions upon the subject. Those who think it sufficient to produce complete paralysis of the accommodation state that it should be instilled every five or ten minutes, and three or four instillations practiced, and that the examination should be made within one or two hours. Using it in this way, and following it by another mydriatic without alteration in the result, are the statements of such reliable observers as Dr. Edward Jackson, of Philadelphia, Dr. Henry Gradle and Dr. F. C. Hotz, of Chicago. Those observers who oppose the efficacy of homatropine to properly suspend the accommodation, do not, it seems to me, use it as directed. Their published statements say, "Frequently used a 4 per cent. solution of Homatropine from twice to four times in an hour, and by the subsequent use of Atropine determined accommodation had not been completely abolished; for a greater degree of hyperopia appeared under the latter."

A series of twenty-five cases examined as follows: At the first consultation the usual record was made of the condition of the eyes and appendages, apparent refraction, vision, and whether the latter could be improved by lenses or not.*

The eyes were then subjected to the influence of Homatropia. For this purpose a fresh 1 per cent. solution was employed, and of this one drop was instilled into each eye five times in the course of fifty minutes, and the examination begun in an hour from the time of the first instillation. A record was made of the time of each instillation and of the time of commencing the examination. Then a record was made of the state of refraction, and the patient directed to return the next day. In the meantime a drop of a 1 per cent. solution of Sulphate of atropine was to be instilled in the eye every three hours. It was so planned that at least four instillations of Atropine should be secured.

* Eye Records, Pulte Medical College, Cincinnati, 1892.

When practicable, the Atropia solution was continued for two or three days, with daily notings of the condition of refraction, and in some cases where there were other indications for Atropia this was continued for several weeks.

In each case the state of refraction was determined by the glass giving the most distinct vision at twenty feet, with good and uniform illumination. Control tests by ophthalmoscopic and keratoscopic methods were also employed.

In the analyses of the cases they were divided into four groups:

1. Those in which there was no difference in the effect produced by Homatropia and Atropia—fourteen cases of the twenty-five, or 56 per cent.

2. Those in which the use of Atropia for twenty-four hours showed a diminution of refraction, without further change by longer continuance of Atropia—two cases, or 8 per cent. The addition of a +.25 D. cylinder was required for the right eye in one case.

3. Those in which the use of Atropia for twenty-four hours showed no change from the relaxation produced by Homatropia, but in which change developed by longer use of Atropia—three cases, or 12 per cent. These three cases were of simple hyperopia, and required from .25 D. to .50 D. stronger convex glasses.

4. Those in which there was change from Homatropia to Atropia used twenty-four hours, but in which there was also additional change by longer use of Atropia—four cases, or 16 per cent. Three of these four cases were of mixed astigmatism, the changes in the glasses being represented by one of the strength of 0.25 D.; the fourth case was of hypermetropia requiring convex lenses of 0.50 D. stronger than shown under the test of twenty-four hours.

The use of atropia after homatropia and the use of atropia beyond the period of twenty-four hours shows the additional refraction revealed to have ranged between 0.25 D. and 0.50 D.

The records of thirty-two eyes carefully analyzed by the author, in which the examination under homatropia was made with a four per cent. solution used four times in an hour, followed by atropia used at least three times in twenty-four hours, gives the following:

1. The ages varied from 16 to 26 years.

2. Refraction, hyperopia or hyperopic astigmatism.

3. No difference in the refraction under homatropia as compared with atropia, two eyes, or 6¼ per cent.

4. A diminution in refraction under atropia after the use of homatropia noted in all of the remaining thirty eyes, or 93¾ per cent.

5. The additional refraction revealed ranged between 0.25 D. and 0.75 D.; in one case the difference was 1.50 D.

Comparative tests of atropine and hyoscyamine have shown the latter to paralyze the accomodation in from twenty to thirty minutes, strength of solution one part to one hundred of distilled water, one drop in each eye. In five cases the methods employed were as follows, apparent refraction ascertained; hyoscyamine instilled, in thirty minutes near point found to coincide with far point, refraction ascertained by trial lenses and control tests; atropia used three times in twenty-four hours, refraction ascertained as before. In all of the five cases the results coincided. The effects of the Hyoscyamine, in another series of five cases, were found to pass off in from three to eight days; the accommodation was interrogated to determine this point accurately. In none of the cases were disagreeable symptoms noticed. The ages ranged between 12 and 29 years.

The second point, the mydriatic best adapted for general use, seems to be hyoscyamine because of its rapid action, the readiness with which the ciliary muscle recovers its power, and the uniformity of results in comparison with atropia.

Risley (S. D.) on Hyoscyamine as a Mydriatic.—The superiority of the solution of the white salt of Hyoscyamine as a mydriatic over the other solanaceæ is so great that the writer uses it for all refractive work except in selected cases. The reason why many are disappointed in its use is a lack of care in selection of the specimens of the salt. In all cases where its use was followed by smarting and too long persistence of mydriasis, it was found, where the history of manufacture could be followed, that it had been made from the amorphous semi-fluid salt, and not from the white, dry crystals. Hyoscyamine is isomeric with Atropine and Duboisine, and so is very closely related to the others. Indeed, W. Will has shown that, under certain conditions only, Hyoscyamine can be extracted from Belladonna, and then turned into Atropine by simply heating to the melting point, treating with an alkali, or heat in the presence of hydrochloric acid. One grain of a 10 per cent. solution of Hyoscyamine was completely converted into Atropine by one drop of soda solution in two hours. The writer concludes, first, that for ophthal-

mological purposes only the pure crystals of Hyoscyamine skillfully prepared should be used; second, that in dispensing it the solution should be strictly neutral, that only moderate degrees of heat, if any, should be used, and, when filtered, this should be done through neutral paper.—*Annals Ophthal. and Otol.*, Kansas City, January, 1892.

In all cases requiring the use of a mydriatic it is well to follow Dr. Edward Jackson's advice; that is, to place the drop on the upper part of the cornea, allowing it to flow down over its surface; prevent the lids from closing, and thus carrying part of the drug away, and to prevent the drug from entering the puncta lachrymale.

The Ophthalmometer.*

It is just a century since the English philosopher, Thomas Young, observed the asymmetry of the dioptric system in his own person, and who is accepted as the discoverer of regular astigmatism. Nearly fifty years passed before this knowledge influenced the practice of prescribing glasses. In 1827, England's Royal Astronomer, Airy, described the asymmetry of his own eye and considered it as a defect. He was the first to have used cylindrical glasses for the correction of the error he himself discovered. The invention of Helmholtz's ophthalmometer gave a new impetus to the study of this imperfection of the human eye. Many famous physicists with the aid of this instrument studied the dioptric system of the eye. Fundamental points were settled, as, for instance, that the curvature of the cornea is not changed by accommodation; that astigmatism is almost exclusively due to the form of the outer surface of the cornea; that all eyes, with but few exceptions, have a certain degree of astigmatism; that the meridian of strongest refraction is the vertical one in the great majority of cases. Notwithstanding all this, the ophthalmometer did not come into general use, and practice contented itself with subjective tests.

To Javal's energy and perseverance we are indebted for the special

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* "The Determination of Astigmatism with the Ophthalmometer." Carl Keller, M.D., *Journal Am. Med. Ass'n*, September 13, 1890.

"Javal's Ophthalmometer and Atropine." *N. Y. Med. Journ.*, September 10, 1892.

"The Main Defects of Javal's Ophthalmometer." Carl Weiland, M.D., *Medical News*, June 4, 1892.

form given to the ophthalmometer that bears his name. The principle of the instrument was, of course, well known before Javal's time. Taking his starting point from the general stock of knowledge, Javal gave the bi-refracting prism a definite place in the telescope, then made the calculation for the refractive power of the cornea, and added the arc and two reflectors. The calculation and the arc, as well as the two reflectors, are not absolutely correct, hence variations noted by different observers and the necessity for increasing or diminishing the findings of the ophthalmometer by from one-quarter to one-half dioptre.

In the first place, Javal makes the relation of the object to the image depend upon the formula $\frac{O}{I} = \frac{2d}{r}$, which is the formula used by Helmholtz in his calculations, but he placed his object at 2000 mm. from the cornea, while Javal makes the distance equal only 270 mm. This formula is right, if the object lies so far from the mirror that its image falls at the focus of the mirror, which is at $\frac{r}{2}$. To prove the inaccuracy we must remember that Javal's instrument that the image, I, is always a constant quantity as soon as the two reflectors have been adjusted so that their two inner images touch. Working out the problem we see, therefore, $\frac{O}{I} = \frac{2d}{r}$ becomes $\frac{O}{3} = \frac{540}{7.8}$, as r, the average radius of curvature of the cornea, equals 7.8 mm. Then $O = 215.13$ mm., whereas the instrument makes $O = 200$ mm., to say nothing of the result obtained by using the more correct formula $\frac{O}{I} = \frac{2d + r}{r}$, if we desire to fulfill the correct condition stated above.

Another source of error in the instrument arises from the fact that the reflectors slide on an arc, consequently the distance of the object from the cornea undergoes a change in the adjustment necessary to get contact of the images. While this error is small yet it helps to show that the instrument is not as accurate as we are led to suppose from statements of some observers. The remedy for this defect is simple and no doubt will soon be applied by the makers of the instrument.

In the calculations for finding the refractive power, or the radius

of curvature of the cornea, certain values not absolute in themselves, have to be adopted. Another observer using exactly the same formulæ but adopting different values for the index of refraction of the cornea and aqueous, and for the radius of curvature of the cornea, will of course arrive at different results. But as we are discussing the mathematical principles applied to the special form of the ophthalmometer of Javal, we must use the formula he himself has indicated, together with the values thereto attached.

Javal's formula for finding the refractive power of the cornea, in the different meridians expressed in dioptrics, is:

$$D = \frac{1000\,(n-1)}{r} = \frac{350}{r}.$$

Here $n = 1.35$, index of refraction of cornea and aqueous; and $r = 7.8$ average radius of curvature of cornea. But as we want to find the refractive power of the cornea for rays coming from the outer world, we must take account of the refractive index of the cornea *in addition* to its radius of curvature, for this alone tells us how far back from the anterior surface of the lens, parallel rays from distant objects would meet. Hence, the correct formula expressed in dioptrics should read:

$$D = \frac{1000\,(n-1)}{r\quad n} = \frac{350}{rn}.$$

According to these formulæ we have the following table illustrating the differences:

35 D of Javal ought to be 26.4 D for $r = 10$ mm.
43 D of Javal ought to be 32.2 D for $r = 7.8$, etc.

Although the question is not as to the absolute refractive power of the cornea, but the difference between those powers in the different meridians, in other words the amount of astigmatism. But the amount of astigmatism is affected also, for example:

1 D astigmatism of Javal only = 0.75 D of the cornea.
2.5 D astigmatism of Javal only = 2 D of the cornea.
3.5 D astigmatism of Javal only = 2.6 D of the cornea.
6 D astigmatism of Javal only = 4.5 D of the cornea.

From the formulæ given above for finding the refractive power of the cornea we see that all the values of Javal for the amount of refractive power of the cornea and the amount of corneal astigmatism are n times too large if n = index of refraction = 1.35. Hence we see a reason for Javal's instruction to subtract half a dioptre when the astigmatism was with the rule, or give the full correction or add half a dioptre when the astigmatism was against the rule. In giving this instruction, which is a recognition of the variation of the instrument, Javal assumed the variation to be a constant one. While this is so, we must not forget that half a dioptre does not always make up for the difference, and so not be led to expect more of the instrument than it is capable of giving.

This instruction of Javal has been followed in all of the statistics of refraction examined with the instrument that have come under my observation, and to my mind is the reason for the good results obtained with the instrument in clinical work.

In concluding this brief study of the ophthalmometer I have to reiterate among other of our criticisms made at the meeting, one year ago, of the American Institute of Homœopathy, viz., the very principle of the instrument is defective, because the bi-refracting prism is not achromatic, which makes it impossible to get the accurate contact of the images so necessary for an accurate result, for the simple reason that a sharp definition of the images cannot be obtained.

It is not uncommon experience to find the indications of the ophthalmometer exactly reversed by subsequent use of other objective tests. For instance three cases recently examined in which Javal's instrument indicated an astigmatism with the rule requiring for its correction either a convex cylinder axis 90° or a concave cylinder axis 180°. Retinoscopy, or the "illumination test" according to Schweigger, indicated the opposite conditions, the patients requiring for correction a convex cylinder axis 180°, which latter glass they accepted, getting perfect vision and comfort.

From the foregoing we may summarize the use of the ophthalmometer as follows:

1. It shows the meridians of greatest and least refraction with certainty.

2. By its use mydriatics may be dispensed with in a greater proportion than is the case with other methods of estimating astigmatism.

3. From reasons stated at length in the body of the paper its form and principle do not warrant us in relying upon it exclusively.

The objective test just referred to is one to which we wish to draw especial attention. With its history and various names you are quite familiar. Some ophthalmologists attach but little importance to it as a test, others practice it constantly and value it accordingly. We shall not rashly claim it as an infallible test, nor recommend it to the exclusion of others, but it can be shown to be the most convenient and accurate objective test for *estimating* astigmatism, particularly astigmatism of small as well as of larger degree. In this particular it differs from the ophthalmometer, in that the latter is most useful in the adjustment of astigmatism below about 1.5 dioptres.

Relative to the use of mydriatics in the practice of retinoscopy, we may state that it is our practice to suspend the accommodation, because spasm of the accommodation is frequently present in cases of astigmatism. Here, as elsewhere, accurate correction of errors of refraction requires skill and practice, and a knowledge of refraction.

This allusion to retinoscopy is not for the purpose of describing it in theory and method of practice, but to call your attention to Dr. W. E. Lambert's apparatus to obviate the tedious process of changing glasses in front of the patient's eye.*

His apparatus "consists essentially of two discs, about 12 inches in diameter; in these discs concave and convex spherical lenses are so arranged that by adjusting one of the discs for a certain range of glasses, the strength of the glass in front of the eye-piece is increased or diminished 0.25 D. by turning the other disc either to the right or to the left. The cylinders are arranged in consecutive numbers from 0.25 D. up, in slides which fit into a clip on the front of the eye-piece that revolves, so that the cylinder can be placed in any axis, the same being indicated as on trial frames; the strength of the cylinder can then be increased or diminished by pushing the slides through the clips."

In this connection reference should be made to Dr. Elmer Starr's instrument for quickly determining errors of refraction. In this instrument the important condition of ascertaining the visual acuteness

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* "Retinoscopy as a Means of Estimating Astigmatism," by W. E. Lambert, L.R.C.P., *N. Y. Med. Journ.*, August 27, 1892.

and refraction simultaneously is met, for the retinal images of all eyes examined by it have the same size.*

It would not be in keeping with our high regard for the genius of such men as Helmholtz, Mauthner and Loring, to pass this portion of our subject without a reference to the ophthalmoscope as an aid to the determination of refraction.

The difficult "direct method" of examination bids fair to be superseded by the use of the ophthalmometer and other objective tests, unless the young men in our department of special study keep ever in mind the high quality of ophthalmoscopic work heretofore. Briefly this method, like that of retinoscopy, recommends itself because it offers a means to determine the refraction of the eye independent of its visual power or the statements of the person examined, and it gives us a means to measure the amount of elevation or depression of different parts of the fundus. This classical method requires long practice in overcoming one's own accommodation, and skill in the use of the instrument, the ophthalmoscope. The practical men look upon the direct method of examination with the ophthalmoscope as of very doubtful value, but to the lovers of the ideal, this method cannot be neglected.

We have thus far concerned ourselves more with the methods of estimating the refraction of the eye than with the details of correcting its errors. Coincident with this latter a train of interesting and important questions present themselves; the whole subject of eye-strain and its attendant symptoms falls legitimally within its scope. The province of writers upon ophthalmic subjects is at the present time to bring into order such as has been discovered relative to the general subject, eye-strain. This term has become quite generally used and its application must now be sought before any intelligent discussion can take place regarding headache due to refractive errors, nervous phenomena definitely related to faulty refraction, muscular insufficiencies with errors of refraction, and kindred questions.

In beginning, we shall of necessity have to clear our ground, not because the facts about to be presented are new or strange; the facts are old; the fault is in the use of the terms in which they are clothed. We read much about eye-strain as a cause of headache, and yet few

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* "A New Instrument for Quickly Determining Errors of Refraction," by Elmer Starr, M.D., *N. Y. Med. Journal*, April 9, 1892.

have sufficiently examined the meaning and application of the term.*

There are many reasons for this; the discovery of reflex neuroses has come about slowly and silently. No one man has made it, and yet, paradoxical as it may seem, there are but few men that proclaim the importance and realize the value of the discovery. In properly introducing this part of our subject, we shall have to dwell for a moment upon the action of the ciliary muscle, which is a muscle closely allied in its anatomy and physiology to the sphincter muscles elsewhere placed in the economy. We do this because the intelligent management of such parts of the body possessing muscles of this class is a matter of great importance. All Homœopathists, we use the term advisedly, at once see in this a reference to a department of surgery, which owes its existence to the skill of a surgeon of our school well known to you all. We value the orificial methods because they deserve it, believing them to be therapeutic measures, however, that depend for their exercise upon an exact knowledge of delicate physiological functions that few possess, and upon a discrimination and judgment with which few are endowed.

The promulgation of knowledge of the influence of over-work of the ciliary muscle depends upon the ophthalmologists, and unfortunately it is the fashion of great numbers to sneer at specialism, and especially at the specialist who puts forth a new truth he knows, and at first only he can know.

Refraction work is becoming of more and more importance, and the future routine work of the specialist will be largely in this line. Do we exaggerate when we state that the more common complaints of half of the patients that apply to the general physician are of headache and digestive disorders? It is for the general practitioner to say how many of these get permanent relief. Do we not know that a large proportion of women hopelessly suffer from these complaints? Of this large proportion how many have had the eyes interrogated as a possible cause. Do you, specialists, not know of many such cases permanently relieved by the correction of an astigmatism, perhaps compound hyperopic, and unsymmetrical at that.

Consult the current literature and if these things are true to the extent indicated, may not the general standard of health be lowered?

* "Headache and Eye-Strain." By Thomas M. Stewart, M.D., *Trans. Homœopathic Medical Society of Ohio*, 1891.

You may say we attribute too much importance to eye-strain and that these are but the statements of another enthusiast. Stop for one moment and consider the statements. Headache—disturbed function of the organ closely related to vital functions—and disordered digestion—nutrition the basic function, the source of vital power—and we are accused of over-valuation of the prime cause of their existence.

For many, many years specialists have been constantly speaking of eye-strain due to faulty refraction, as the chief causes of headache. Personal inquiry of the leading specialists in Europe but three years since, showed this fact to be almost unsuspected, very generally disbelieved, and so far as therapeutic use of it, unheard of. Even in the United States sufficient has not yet been said.

After all other means known to the medical profession for the relief of headache have failed to re-establish functional activity, refraction work can in the majority of cases produce such startling and satisfactory results as to be a perpetual surprise even to those familiar with them. As regards headache, that is only one-half the truth. We have seen that with headache there is also nutritional disturbance. The influence of eye-strain upon the general system will not be fully realized until there is a general recognition that such disturbances of the general health as we have mentioned are frequently due directly to eye-strain. Proof of this is ready:* Let the doubter put on a pair of lenses fitted to a trial frame, such as every oculist uses every day. At the very most, but a few hours will elapse when the artificial ametropia in this manner produced will bring on headache, and not only nausea, but probably vomiting. Another test suggested in the article above referred to: Paralyze the accommodation for a week or ten days in a young patient suffering from suspected ocular reflex. The frequent relief will be an objec.-lesson in differential diagnosis.

It seems well nigh impossible to become sufficiently familiar with the brilliant and far-reaching effects of refraction work in functional nervous diseases, to entirely escape the feeling of astonishment at the immediate transformations which are the common experience of refractionists. When a patient has suffered from sick-headache for twenty years to a distressing degree, to see entire relief quickly

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* *The Pulte Quarterly*, October, 1891.

obtained from a pair of spectacles, will always astonish one, no matter how many times it may be observed. In generally impaired nutrition, in the nervousness of neurasthenics, we may have the worst result of eye-strain. Even in health, during waking hours the eyes are never at rest. The muscles of the eyeball and lens demand innervation at least sixteen hours daily. Binocular vision is a very complex performance, demanding for its performance on the harmonious co-operation of several cerebral centres. The second, third, fourth and sixth cranial, and the sympathetic nerves are constantly called upon to furnish the nervous force for this important organ. Now, if one or more parts of this system be defective, an extra strain is thrown upon the other parts. The organ of vision is the only one in the human body where perfect functional activity depends upon *exact form.* This is by reason of its dependence upon the laws of refraction of light. Many questions present themselves at this point: the correction and treatment of hyperopia, always an important one; the full correction of myopia, and its effect on the eyes; the correction of astigmatism, and what is the best means to this end; the value of the 0.25 D. cylinder in headache and eye-strain; amblyopia, and its systematic treatment with gradual increasing lenses; muscular insufficiencies, and their relation to errors of refraction, and a host of subjects relative to refraction work. But as the central idea in our essay thus far has been the discussion of principles, we may find, in closing with some reference to the reason for so much eye-trouble in modern life, sufficient to cause us to mend our methods of handling refraction cases in the first instance, and many questions now hotly discussed on both sides, may lose entirely their identity.

With Gould, we say: reflection upon what history tells us, will show that up to the present century the clearest possible distant vision was alone demanded of the human eye. The progress of civilization demanded close and continued use of the eyes at the near point, due to the wonderful progress in the art of printing, to the multiplication of schools in compliance with compulsory educational laws, and the close application demanded of the commercial man of to-day.

All this is of the present century; in the midst of all this, what of the human eye? An organ habituated by centuries to performing certain work, cannot, without harm, be forced in an hundred

years to a usage exactly opposite. There is no doubt in our mind that the labor to which the eye is put brings ocular congestion, with consequent variation in tension. Furthermore, this is certainly of some influence in producing astigmatism, *the* factor in eye-strain. Accurate vision is a necessity in this day; because of the slavish continuance of long ocular and physical labor, there is increased demand on the ciliary muscle and nerve centres supplying the eye, and as a consequence the manifold reflex and local ocular disturbance.

Any physiologist will say that the eye is an organ greatly overworked, an organ intimately associated with every mental and physical act—its adjustment to perform its various functions being the perfection of delicacy. In the light of all this, is it too much to lay down the following: that every child should have his eyes examined, to detect any existing abnormality before harm is done. And at this point comes the question, how shall this examination be conducted? It seems to me that the changes of the present century, as contrasted with the preceding, indicate the lines along which the examination should be conducted.

It is needless to insist upon its being done by a trained ophthalmologist, with the help of mydriatics. The refraction to be worked out with the trial lenses to within a quarter of a dioptre, and that care be taken to examine the optician's work in the quality and the centering of the lenses, and in the adjustment of the frame.

Discussion.

Charles H. Helfrich, M.D.: The doctor says that Hydrobromate of hyoscyamine is in his opinion the best mydriatic for *general* use. Personally I think its use ought to be so restricted that it should never be used in people over thirty-five years of age.

The alarming symptoms it frequently produces in people above that age, such as partial paresis, vertigo, heart failure and delirium, should teach us to be rather cautious in its use.

As it produces rapid and complete paralysis of the accommodation and its effects pass off usually in about three days, it is a favorite mydriatic, but I have been taught by some very unpleasant experiences to select my cases.

It is my practice to drop it in the outer canthus while the patient tilts the head toward the side of the eye being thus instilled, and to immediately dry it with a piece of soft linen.

In this way I have had less ill effects than when dropped on the upper surface of the cornea as the doctor directs.

He speaks of the beneficial results obtained from using mydriatics, by not only putting the eye completely at rest but on account of their sedative action also.

My experience has taught me that this is of the greatest importance, and is not secondary even to the difference in results obtained between the tests with and without their use. A large number of cases of simple and compound hyperopic astigmatism, tested under the influence of mydriatics, do not differ sensibly from the test without. By this I mean the axis and the strength of the cylinder remains unchanged, and we have added only the latent hyperopic which was expected, of course.

In simple and compound myopic astigmatism also it is not uncommon to get exactly the same test under the influence as before, yet a great many of these very cases cannot tolerate the correction at first. Then spasm is suspected and mydriatics used. Finally we arrive at practically the same glass we found at first, and the patient is able to wear it with the greatest comfort.

The ophthalmometer is gradually sinking to the level of the proper sphere of its usefulness.

Giving corneal measurements only, it does not embrace the changes produced by astigmatism residing in the lens.

As is well known, lenticular astigmatism may just neutralize the corneal astigmatism, or it may augment it, or even reverse its character entirely.

It can hardly be considered as being more useful than a check upon subjective methods, or, perhaps better, an aid.

After all, how much need has a competent man of anything besides the ordinary subjective methods and the ophthalmoscope?

The use of other appliances are invariably followed by the subjective tests also, and decision is given to the results of the latter.

In refractory children who are determined not to wear glasses, and in people who are too illiterate to read letters or figures, these auxiliary methods are sometimes of great assistance.

From the scanty mention made of muscular insufficiencies, I infer the doctor relies upon the careful and minute correction of the refractive error to relieve eye-strain and its chain of allied disorders rather than exercise of the weakened muscles or correction by prisms or tenotomies.

Those enthusiasts who are being called upon to advance some of the muscles they set back several years ago, are learning to place the operation where it properly belongs. While it has proven a boon to a large number of sufferers it has produced a quota of its own. Moderation is becoming the order of the day.

D. A. MacLachlan, M.D.: There is much to commend in Dr. Stewart's admirable paper, and I cannot do better, perhaps, than to enlarge somewhat upon thoughts which he has not discussed at

length. We all differ, however, in our methods of thought and action, and we often get mutual good in comparing ideas and methods. Very frequently our differences are not due solely to native peculiarities, but to early instruction, surrounding circumstances and opportunities, the kind of patients we have to treat, etc.

I am not in the habit of relying upon the ophthalmoscope in determining refractive errors. In fact, I seldom rely upon any one method; and even after verifying one test by another, and another, and accurately measuring the refraction, it has been my experience that a large amount of judgment must be exercised in prescribing lenses. We find, as we do in prescribing remedies, that each person is an individual having native and acquired peculiarities which must be taken into account in our endeavor to relieve his complaint.

We all believe in the necessity of mydriatics to determine refraction accurately, and we are all indebted to Dr. Stewart for giving us the results of his careful and thorough investigation as to the relative value of the various drugs in use. My own preference is for homatropine, chiefly because accommodation is so soon recovered after its use. For years I have used a preparation comprised of homatropine (the alkaloid) and cocaine, of each 10 grains and castor oil 1 ounce. It acts much more profoundly than the aqueous preparation of the hydrobromate, which is insoluble in castor oil. The oil is not as pleasant to use as water, but the very sticking to the lids, which is the unpleasant feature, causes it to be retained longer in the conjunctival sac, and thus renders the drug-effects more profound. I have rarely found the use of any other mydriatic necessary. When relaxation is desired for a length of time, I have used atropine or hyoscyamine from the start. One drop of the homatropine preparation usually produces complete relaxation in from twenty to thirty minutes, which lasts about twelve hours. The eyes should be kept closed until the examination begins, to avoid the slight corneal film arising from the cocaine. A four-grain solution of eserine, which I use in oil also, restores accommodation in a few hours.

As my patients are largely students, who must use their eyes again within a few hours at most, I am obliged to use something very transient in its effects. The mydriatic being so unobjectionable I use it in almost every case, and almost always associate examination of the fundus at the same time, so as to learn the exact condition for record and possible future reference.

Retinoscopy is a favorite method with me also, especially in examining children, or unintelligent patients, and in bad cases of astigmatism; I find it a great saving of time in many instances, and the greatest possible help when other methods can hardly be used at all.

The question of eye-strain is of such peculiar interest that I cannot refrain from saying a word upon the subject. That it is of the highest importance no one doubts. So much has been said concern-

ing it that specialists are frequently accused of making a "fad" of it. While I recognize that it is a very great factor in producing numerous and varied disorders, I must be classed, I think, among the conservatives.

Doubtless, over-use of the eyes, more than any one thing, makes it necessary for patients to put on glasses. General enervating influences, however, in most cases, make ordinary use of the eyes over-use. The student who reads long and late, at the same time deprives himself of necessary exercise and fresh air, and in the majority of persons there can be but one result, viz., loss of vigor and that physical well-being which we call "tone." Now, he becomes "bilious," and ordinary use of the eyes becomes over-use, while his study must be kept up, and so he goes from bad to worse. Glasses, like crutches to the lame man, will tide him over until he can resume his hygienic habits and thus regain lost strength, after which his glasses may possibly be discarded.

A somewhat extended experience in general practice making me acquainted with the many localized conditions which induce systemic derangements has made me less hasty in ascribing headache, dyspepsia, etc., to eye-strain. A goodly number of nervous disorders are undoubtedly due solely to refractive errors, but by far the larger proportion are due to lowering of general tone and vigor in the first place. When this has occurred, an accommodative or muscular effort that had formerly been made with ease now becomes difficult and painful. How often do we see patients who have for thirty or forty years had the most perfect health with never a suspicion that there was anything abnormal about their eyes, following an illness, find themselves unable to read or use the eyes without serious trouble, which nothing but glasses would relieve. Perfect recovery from the spell of sickness may have taken place in every part but the eyes. There the natural defect which previously required no conscious effort to compensate for, now must be corrected.

My own case is a fair example of this. I require a lens of + .25 D. S. E. + .25 cy. ax. 90, for each eye for reading only. Up to 30 years of age I had subjected my eyes to the hardest kind of use without ever experiencing the slightest difficulty, although I had, more than once, suffered from severe illness—in one instance, from malaria lasting two or three years. During one winter, I became greatly reduced in strength by overwork, while at the same time my eyes were unduly exposed to sun and snow. From that time I have suffered more or less constantly from eye-strain. Several leading American and European oculists have prescribed for me both simple and compound lenses, including prisms, but nothing gives me more than partial relief. When I am in the best possible physical condition I have the least difficulty, and *vice versa*.

It would seem to me very far-fetched, indeed, to attribute my ocu-

lar disability to refractive error. It was not a factor at all, until my general vigor was impaired, and is now proportionately lessened or increased by improvement or loss in my physical condition.

I sometimes think that weakness of the ocular muscles has more to do in producing eye-strain than do errors of refraction. And yet, how often we find a refractive error deranging the ocular muscles. I recall the case of a vigorous man of about 25 years, a farmer, who had very bad convergent strabismus. He was perfectly healthy, and suffered no inconvenience except constant and somewhat annoying diplopia. He brought his child to me for operation. I noticed his own crossed eyes, and examination showed a manifest hypermetropia of about 1 D. in both eyes. Relaxation revealed a total of about 4 D. Thinking it would be an interesting experiment to try the effect of the correcting lenses upon the strabismus, I fitted him with glasses, with the result of completely straightening the eyes.

In this case, the refractive error caused spasm of both the ciliary and internal rectus muscles, and was, moreover, the sole cause of the trouble. Such striking instances, however, are comparatively rare. In the vast majority of cases, the cause of the ocular difficulty is a mixed one, depending, first, upon a predisposing cause, such as ill health or reduced vigor; and second, upon an exciting cause, such as a refractive error, or a lack of balance, or co-ordination of the ocular muscle. In my own experience, eye-strain is rarely the cause of such remote troubles as dyspepsia, etc.; my own observation would lead me to think that the effects of eye-strain are limited to disorders of the head, with a few secondary reflex disturbances of more distant parts.

It is true, that putting strong glasses over normal eyes will induce prompt nervous disturbances; but, it also is true, that eyes which have been accustomed to abnormal refraction from birth experience a surprising degree of comfort and good vision. So reconciled do they become to the effort required to compensate for their ocular defect, that, frequently, they will not tolerate correcting-glasses—it has become "a second nature."

I most heartily endorse Dr. Stewart's suggestion that all children's eyes should be examined. If there is a sufficient error to require correction, it can scarcely be done too early. Squint, amblyopia, exanopsia, and other conditions dependent directly or indirectly upon abnormal refraction may be averted. The ultimate form, mind, and disposition of such a child may be greatly improved also, by proper glasses.

The paramount importance of this subject makes it more desirable that we, as specialists, should be fully conversant with the subject, and that we should treat it in a simple, *scientific* way. I mean by that, that we should be careful not to attribute to eye-strain more of the ills of humanity than properly belong to it. We often blame

the general practitioner because he seems to attach little, if any, importance to eye-strain as a factor in disease, but I sometimes think he is driven to assume this indifference to it by the extravagant claims of some specialists, who would have us believe that nearly all disease is due to refractive errors and allied disturbances in the eyes.

Myron H. Chamberlain, M.D., Council Bluffs, Ia.: I think I understand the doctor to say that refractive powers should be corrected in troublesome cases, especially up to one-quarter dioptre. Perhaps it was difficult for me to hear him, but I know a great many cases where I have found that refractive troubles of only one-quartre dioptre, especially astigmatic, have given a great deal of trouble, and a correction of this has been very satisfactory to the patient. I would like to know the attitude of the profession on that point because I have so many of that kind of eases, and have got such relief from them (especially from those who are in the habit of complaining of eye-strain) by correcting one-quarter dioptre of astigmatism.

Harold Wilson, M.D.: I think I understand Dr. Stewart to imply that he would prescribe glasses for children at as early an age as they could wear them, and which may be, perhaps, anywhere from two and a half years up.

Now I wish to enter my protest against prescribing glasses for children when it is not necessary. It is very well known that the refraction of the eye undergoes a modification from childhood to adult life. The normal condition of the child's eye is hypermetropic. Now why should we prescribe glasses for hypermetrophy in children simply because we have found that such a state of refraction exists, when we know that hypermetrophy may become obliterated by the natural process of growth? If we put our glasses on, we destroy the natural growth of the eye. If there are not sufficient reasons for doing so, I, for one, enter my protest against burdening children. This same feature applies also to adults; for in a great many cases it is often possible to avoid the use of glasses altogether by proper treatment of the patient himself or of the eyes themselves. There is one method of examining the eye to which I do not think Dr. Stewart referred (though I think I did not correctly hear all of his paper), and that is the shadow test for determining the refraction. In my experience, and in my judgment, we have in the shadow test one of the most accurate, most rapid and most satisfactory methods of making the examination. To any members of this section who have not enjoyed this method I most heartily recommend it. It is very accurate in the determination of small degrees of astigmatism where we are perhaps more anxious to obtain accuracy.

Dr. Linnell: There were two points in Dr. Stewart's paper which I do not clearly understand. I would like to ask the doctor

the question, in the first place, as to the strength of the Hyoscyamine solution; and whether he uses the same Hyoscyamine or a solution. I understand the doctor to say that he uses the Hyoscyamine solution alone.

E. Elmer Keeler, M.D., of Syracuse: It is with more than pleasing attention that I have listened to the paper of Dr. Stewart and the discussion thus far, and I am sure that the members will agree with me when I say it is a question of vital importance to our patients, and if there be a drug that we may use with universal satisfaction, I, for one, will be very glad to use it in place of Atropine. But in the remarks that have been so far made they show that generally where the results would be satisfactory, it is claimed it is made from these other mydriatics, and if so, it leaves us in a faulty position. I have given all the various mydriatics a thorough trial in my practice, and must say that I have discarded them for the old stand-by. That point I would like to have some one emphasize emphatically—if it can be made a universal and successful drug—any one of these mydriatics.

Wm. R. King, M.D: I have very few remarks to make. In the first place, the subject of the correction of the low degrees, as spoken of by Dr. Chamberlain, to my mind, is the most important, or, at least, we get our best results in reflex neurosis, as a result of refractive errors. That has been my experience. In cases where we have a more or less high degree of refractive error, whether it be hyperopia or astigmatism, there are describable symptoms ascribable to the eye. This neurosis is ascribable to more distinct, and often overlooked, degrees of astigmatism as low as one-quarter dioptre. The correction of low degrees has often relieved symptoms that have entirely baffled remedies and hygienic treatment of other physicians and those who are not examining and looking to the eye for causes; and I think, for that reason, they give us, perhaps, the most unsatisfactory results in the correction of those low degrees.

With reference to mydriatics, I may say that I never, or almost never, use them. I am satisfied with my results without mydriatics, and my patients seem to be satisfied with them, and, consequently, I very rarely use them unless I have a case of very severe ciliary spasm to deal with. I find the necessity for mydriatics becoming less frequent wherever I have been. The only mydriatic that I have used to any great extent has been the old reliable Atropia. The Hydrobromate of bromium I have used several times. I cannot say that it has been of more advantage from the fact that its effect sooner passes away. We get, of course, absolute correction with mydriatics of the absolute amount of error, but it is not always the correction that is of most practical value to the patient.

Dr. Stewart, in closing the discussion, said: There are two things in the paper I did not do. In the first place I did not try to

cover all the ground, and for two reasons. In the first place I was not capable of doing it, and if I could have done it, it would not have left any room for discussion. In regard to the gentleman that speaks of one-quarter dioptre of refraction, let me say that you should examine for errors of refraction and correct up to one-quarter of a dioptre. One question I put very particularly was the value of the twenty-five dioptre cylinder in the refractive work. In regard to children in the prescribing of glasses, to which Dr. Wilson referred, the statement was not to put on the glasses, but it was to examine the eyes, and then, if necessary, use your glasses. The word "necessary" covers a good deal of ground. Of course, that should be left to the judgment of the physician, and it depends upon a great deal. To have gone into the question in detail, that would have been to diverge, so I underlined the word "necessary." I avoided the subject of muscular insufficiencies for a very good reason. In the first place, it is in the hands of a gentleman that is just as capable of handling it as anybody I know in the American Institute in this section. It has been brought up, and I want to say that I have frequently found cases where there were no errors of refraction, and in which I did find muscular insufficiences, and of course I did not ignore the use of the prism. Regarding retinoscopy, I regard it very highly, and I drew some close remarks regarding that and the ophthalmometer; but in my endeavor to get some other points in the paper I avoided that point; but it is in the paper, and the TRANSACTIONS will perhaps show my standing upon that question. Regarding the question of Hyoscyamine and its strength, 1 to 100 has been the strength I have been using, and it has been the pure white crystals.

OPHTHALMIC SURGERY.

By Elmer J. Bissell, M.D., Rochester, N. Y.

Medical history records no more rapid and marvellous advancement than has characterized ophthalmology in the past quarter of a century. During this brief period, spanned even by the professional career of some who listen to me to-day, there has gradually developed a science which excels in its perfection and exactness that of any other department of medicine. From a dark and unexplored chamber the eye has been transformed into a ball of light, revealing not only what is within its narrow bounds, but, like a mirror, much that lies outside it. So vast and important has become the consideration of abnormalities affecting the visual apparatus, and so wonderful, yet still imperfect, our facilities for detecting and overcoming these, that when I was asked to present to this Congress a paper upon ophthalmic surgery and to cover as much of the field as possible, although less than one-tenth of the oculist's work is strictly surgical, I thought that volumes could not do it justice. I shall therefore endeavor to bring before you not only that which is newest, but that which is most practical. There are endless unique operations for rare and complicated cases, but they must of necessity be passed by, and only those surgical procedures be presented which will most frequently tax our thought and skill. By thus limiting the scope of this paper, I hope to elicit a more general and definite discussion.

Aside from a better understanding of the anatomy and physiology of the eye and an improved technique in many operations, three elements—perfected instruments, local anæsthesia by cocaine, and absolute cleanliness secured either by simple irrigation or antiseptic agents—contribute largely toward accomplishing better surgical results than formerly.

Great improvement has been made in the character and quality of our instruments. I think we are under obligation to the manu-

facturers for furnishing us such delicate instruments, perfect in adjustment and yet easily rendered aseptic.

A wonderful boon came to ophthalmic surgery in the introduction of cocaine. By it we not only are enabled to secure anæsthesia limited to the parts to be operated upon, but other quite as desirable and important effects. I refer particularly to its power to contract the bloodvessels, so that less hæmorrhage obscures our work during such operations as tenotomy or advancement for strabismus; and to its action in producing hypotony, a certain degree of which is a great factor in the extraction of cataract. I think more attention should be given to this latter point, because by a careless and unscientific use of cocaine an unnecessary element of danger is artificially induced in operations involving the opening of the eyeball. My rule has been to apply a 2 per cent. solution three or four times during eight minutes in cases where there was a strong probability that an iridectomy would be unnecessary, care being taken that the lids are kept closed during cocainization so as to prevent dryness of the cornea. This strength I have found to produce sufficient anæsthesia and a degree of hypotony which favors the delivery of the lens in cataract extraction, and at the same time aids in preventing prolapse of the iris. In fact, it is this action on the part of cocaine which has done much to make simple extraction possible in so many cases. With a 2 per cent. solution I also believe that a smoother incision can be made, and the healing process goes on more rapidly and perfectly because the epithelium of the cornea is less affected than when stronger solutions are applied. On the other hand, if there are indications that an iridectomy will be necessary, or if there is a slightly increased tension, I employ a 4 per cent. solution and prolong its action to ten minutes. In operation upon the lids or external ocular muscles I use this same strength. By thus individualizing, we can make cocaine serve a double purpose.

The third factor in the general consideration of ophthalmic surgery is antisepsis. The great fact to keep before us is, that the end to be attained is *absolute cleanliness*, and I have no hesitation in saying that if this can be secured and *maintained* without the use of chemical germicidal agents, it is much the superior method, but I do not believe this possible under all circumstances. If the truth could be known I doubt not that many major operations are successfully performed when only ordinary, I may say partial cleanli-

ness has been accomplished and not the theoretical, scientific, *absolute* cleanliness which we talk so much about. Possibly there is a practical surgical cleanliness which is not synonymous with absolute surgical cleanliness. However, as long as we cannot tell what point less than perfect cleanliness is safe and practical, we must diligently strive after the ideal. The fact to be emphasizied is that in our enthusiasm to secure a state of perfect antisepsis, we avoid employing methods or agents irritating to the eye, which indirectly may do more harm than good. Very careful discrimination is necessary. The efficiency of an antiseptic agent is not simply its power to destroy micro-organisms, but to accomplish it quickly. Many of the drugs which possess truly antiseptic properties are irritating to the eye when used in sufficient quantity to be effective, and the question resolves itself into this, whether the dangers are greater in trying to secure cleanliness by simple irrigation and possibly failure to accomplish the high ideal, or by using active germicidal agents which probably prove thoroughly effective, but in many cases cause some irritation which may mar the result of the operation. This cannot be satisfactorily answered without going somewhat into detail and bringing before us a few recent experiments. The list of antiseptic drugs which are being used in eye surgery is quite long—Carbolic acid, Peroxide of hydrogen, Pyoktannin, Chlorine water, Boroglyceride, Boracic acid, the Biniodide and Bichloride of mercury. Some of these are too irritating, others act too slowly, and Boracic acid has been shown to possess no germicidal properties, although it is employed as much as any one drug named. I use it very frequently myself as a means to increase the specific gravity of liquids used about the eye. If it serves no other purpose than raising the specific gravity and thus preventing osmosis, it accomplishes great good. The most effective and at the same time the safest germicide is the Bichloride of mercury. In strengths varying from one to five thousand to one to fifteen thousand, it quickly destroys micro-organisms, but when the anterior chamber is opened, there is a possibility of its inducing striped keratitis, resulting in permanent opacity of the cornea. The experiments of Carl Mellinger go to prove the following facts;

First.—That a solution of corrosive sublimate, 1 to 5000, and even 1 to 15,000, if present in the anterior chamber for any considerable length of time, will cause permanent opacity of the cornea.

Second.—That cocaine alone produces no corneal opacity, but that its presence within the anterior chamber increases the effect of the sublimate solution by making the endothelium more permeable. Its use, also, by lowering the tension, favors the retaining of these solutions within the eyeball.

Third.—That a 3 per cent. solution of boracic acid or a one-half per cent. solution of sodium chloride can be injected into the anterior chamber without any unpleasant results.

My plan of preparing my instruments and patients for all major operations is as follows: All instruments are placed in boiling water, to which one-third alcohol is added. They are allowed to remain a few minute, then dried and transferred to an Arnold's sterilizer, in which also I place all solutions to be used about the eye either during or after the operation. The various solutions of cocaine, atropine, eserine, boracic acid, etc., are in bottles corked with absorbent cotton, and these, with the instruments, are subjected to sterilization for one hour. The instruments are then placed in antiseptic absorbent cotton, and the bottles containing the liquids are not uncorked until necessity requires it. I could never understand the reasonableness of a surgeon being so very particular about his instruments, and at the same time (as I have seen done) employ solutions of cocaine or atropine made up simply with distilled water, and placed in bottles probably not chemically clean. Such solutions I do not believe are sterile, and therefore safe to use. In the preparation of my patient, I have the parts about the eye washed with soap and water, and in the cleansing of the lid-margins and conjunctival folds I make the following discrimination: if there are any unhealthy secretions, such as occur in blepharitis, conjunctivitis, or dacryocystitis, I employ the bichloride of mercury, 1 to 5000. Special attention should be given to the cleansing of the cilia and lachrymal sac. I have never found it necessary to adopt the plan of closing the punata by the cautery, or to employ Pagenstecher's method of slitting the canaliculus, and packing with iodoform cotton.

On the other hand, if there are no unhealthy secretions, I see no necessity of using a germicide, which is irritating to some eyes, but trust entirely to thorough irrigation with a 2 per cent. sterile boracic acid solution, before, during, and after the operation. I employ the boracic acid, not because I believe it possesses any special germicidal

properties, but (as I have stated before) to increase the specific gravity of the liquid. I hold this to be an important point, if solutions are to be injected into the anterior chamber. The above plan of antiseptic surgery has given me highly satisfactory results. Suppuration has been a thing almost unknown, and has never been of a serious character.

Passing now in brief review some of the more recent operations which indicate progress in ophthalmic surgery, I note, first, as one of the most important, the mangle or crushing operation for trachoma. Dr. David Webster says it is one of the greatest discoveries of modern ophthalmology. It is certain, however, that by the judicious employment of this procedure, the poor victims of trachoma are saved months and even years of suffering and annoyance. Dr. Holtz was the first, I believe, to attract the attention of the profession to this plan of treatment; but as he advised the use of the thumb-nails to express the granules, it was not generally employed until others devised instruments which rendered it possible to do more thorough and skilled work. The various instruments which are being used accomplish the same result by slightly different methods. Dr. Noyes's angular forceps are simply a squeezing instrument, so constructed as to facilitate the operation well up in the retro-tarsal folds. Dr. Knapp's roller forceps express the trachomatous substance by a sort of mangle process. Sometimes, in chronic inflammatory cases, before using his forceps, he scarifies the infiltrated parts with the sillonneur of Johnson. Dr. George Lindsay Johnson, the originator of the sillonneur just referred to, scarifies the everted lids, and then destroys the granules with an electrolyzer. This plan is superior to the old cautery treatment. Other instruments have been made, but they do not differ essentially from those mentioned. In all of the above methods, general anæsthesia is usually necessary in order to thoroughly do the operation. The variety or stage of the disease modifies the character of the operation, and affects, to a considerable extent, the ultimate result. The most highly satisfactory cures are obtained in follicular trachoma. There is one point still unsettled : that is, whether or no better results are secured, when these operations are finished, by rubbing the lids with a corrosive sublimate solution. I have employed both methods, and think I have gained quicker results by cleansing (but not rubbing) the lids with the bichloride. In this connection let me

state that I have had very favorable results with "grattage" alone, using a small, stiff brush and the bichloride, 1 to 1000, as advised by Darier, Von Hippel, and others.

One of the unpleasant complications of trachoma is blepharospasm. I have relieved two cases of this condition by stretching the orbicularis with lid-retractors. This operation was first brought to my notice through an article by Dr. Allport. The lids are held widely open for five minutes, and the operation repeated on another day if necessary.

If one subject more than another has occupied the thought of ophthalmologists during the past few years, it has been that regarding the normal and abnormal conditions of the external ocular muscles. Dr. Harold Wilson will bring before you this subject, so that there is only one point which is pertinent to this paper. Is surgical interference necessary in heterophoria? The vast majority of oculists now answer this in the affirmative for some cases; still there are those yet who have not got their eyes or ideas straight regarding it. I care not for your theories; experience has demonstrated beyond the shadow of a doubt that tenotomy, either complete or partial, is the only means which will permanently cure many cases. Neither do I think it wise to spend much time discussing whether a complete or graduated tenotomy is the better surgery. I start in with a partial tenotomy; I often end the operation by making it complete. The fact is, when I accomplish exactly what I want, I do not quarrel with the method. I hardly see how I could get along without both operations. In some cases of esophoria and exophoria, a graduated tenotomy has proven entirely inadequate; while in slight degrees of heterophoria, especially hyperphoria, it has given just the result I desired. In a few cases where, twenty-four hours after the operation, the eye had returned to the same relative position as before the tenotomy, I have permanently improved their condition from one-half to one degree by carefully passing the Stevens hook into the wound and simply re-opening it. No hæmorrhage occurs, and the healing process is only temporarily interfered with. Two years ago, Dr. Winslow stated that tenotomies changed the corneal curvature. Since that time I have tested, with Javal's ophthalmometer, a great many corneæ after the operation, and only in one case have I been able to verify his experience. Dr. Swan M. Burnett has also been searching for

this complication, but writes that he has been unable to discover it. In the January number of the *Archives of Ophthalmology*, Dr. Eugene Smith presents a new method of performing tenotomy. He raises the muscle well up from the sclerotic with peculiar ring-shaped forceps, and then passes a De Wecker stopkeratome through the conjunctiva and centre of tendon, close to its attachment. The only advantage over Dr. Stevens's operation is that less hæmorrhage occurs. I have not performed the operation, but should fear that there would be some danger of passing the lance-shaped keratome into the sclera.

A few rules have served to guide me in my surgical work for heterophoria:

First.—Carefully, repeatedly, and by various methods, test the muscles before deciding upon an operation.

Second.—Correct any existing ametropia and try other plans of treatment first.

Third.—Be reasonably sure that the defect is symptom-producing.

Fourth.—Be over-careful to do too little rather than too much.

My experience has been that tenotomy for heterophoria, if skillfully performed upon carefully selected cases, gives more uniformly definite results than any other operation in ophthalmic surgery.

Closely allied to the surgical work for heterophoria are the operations for strabismus. Nothing markedly new has been presented in this field. Dr. Wray has suggested the introduction of a central suture in advancement operations to take the strain off of the supra and infra-corneal sutures. Briefly, his method is as follows: One end of the suture is secured to the stump of the tendon near the cornea; the other is passed well back so as to transfix from within out the muscle and conjunctiva. Over this end of the suture is passed a perforated shot, and the amount of traction regulated by means of it. It seems as though this would unnecessarily complicate the operation and annoy the patient. I am securing uniformly good results in advancement by using Dr. C. H. Beard's single pulley suture. More perfectly than by any other operation which I have employed has this method advanced the muscle in the direct line of its axis.

It has been a reproach upon opthalomology that so little has been accomplished in removing defects, either in the shape or transparency

of the cornea. Transplantation of the cornea has almost inevitably proven a failure. Galvanism for slight leucoma is far from satisfactory. Dr. Knapp has lately introduced a new operation for kerato-conus, which I think is destined to be quite generally employed in treating this deformity. By means of an oval-tipped electrode he cauterizes the apex of the kerato-conus. Considerable reaction follows, but all of his six cases reported were ultimately somewhat improved. The advantage of a cautery in ulcerations is being more and more appreciated. I use in my office the Edison current for this purpose, and find that some of the worst corneal ulcers heal as by magic after thorough cauterization. In fact, it is largely displacing Saemisch's incision. I have several times perforated the cornea, but no bad results have followed.

There are a number of operations which are in an experimental stage yet and of doubtful expediency. Chief among them are optico-ciliary neurotomy, resection of the optic nerve and injection of the bichloride for deep structural changes, such as in choroiditis.

The last, and still the most important, operation in ophthalmology which I shall consider, is senile cataract extraction. This I cannot hope to present in full, but only touch on certain points, which I trust will elicit discussion. At the present time no question bearing upon this subject is of greater importance than how to deal with immature cataracts. Statistics, such as presented by Dr. W. A. Brailey, show what a small per cent. of cataractous lenses are mature when first examined. In his practice he found only one in seven, excluding congenital, zonular and secondary. Of the immature cataracts, 45 per cent. remained unchanged; 13 per cent. were slightly better; 19 per cent. slightly worse; and 23 per cent. decidedly worse, the interval of re-examination varying from three months to eight years. Dr. A. B. Norton has given us the results of one hundred cases of incipient cataract treated at his office with Homœopathic remedies. Forty-two per cent. remained unchanged; 13 per cent. were improved; 26 per cent. were slightly worse; and 19 per cent. were decidedly worse. There is a striking similarity between the results presented by the two surgeons. This goes to show how hard it is to determine just what is nature and what is drug effect. Dr. Risley believes that vision can be improved or maintained in many cases by correcting errors in the refraction and giving attention to the general health. He emphatically states that

increased visual power is not due to "the absorption of any opacities already formed in the lens, but to improved conditions of the vitreous, choroid or retina."

Admitting that there are cases helped by the Homœopathic remedy and correcting of the refraction, still there is a large class of immature cataracts in which both of these means are out of the question. Sufficient vision remains to go about, but not to engage in the ordinary avocations of life. These are the patients which enlist our sympathy and tax our skill. Waiting for maturation of the cataract may mean broken-down health, or poverty, or both. What can be done? Two active courses can be pursued:

First.—Remove the immature lens as it is.

Second.—Artificially mature it and then remove it.

For myself, I prefer the first plan as involving less risk. This can be accomplished by two methods, each with a variety of modifications. The one feature which distinctly distinguishes one from the other is whether or not injections are made into the anterior chamber. Dr. Tweedy does not use injections, but performs an iridectomy and makes a peripheral opening in the capsule with the Grafe knife. He claims that such a capsulotomy keeps the particles of lens substance, which cannot be removed, from coming in contact with the iris. Some surgeons, however, remove a piece of the anterior capsule, and others make a point of doing a preliminary iridectomy. The method of making intra-ocular injections is rapidly gaining ground. McKeown, De Wecker, Panus, Knapp, Lippincott, and many others, are employing it to a considerable extent. A variety of instruments has been devised for this purpose and a number of different solutions tried. McKeown has used simply distilled water in 70 per cent. and Panus's solution in 30 per cent. of his cases. De Wecker injects a weak solution of Eserine; Lippincott a one-half per cent. boracic acid solution, and Knapp a one-half per cent. of sodium chloride. The bichloride of mercury is not now used because of the discovered danger to the cornea. I have employed injections ten times. If the lens is very immature, as it was in six cases, I do an iridectomy; otherwise not. I make a free laceration of the anterior capsule and inject a warm 1 per cent. sterile boracic acid solution. I have not had a single bad result. In two cases $V = \frac{20}{20}$. A sharp attack of iritis followed in one case,

but was controlled, and useful vision resulted. I employ a one-half ounce hypodermic syringe with a sterling silver tip, and never use the same tip on more than one case. A point made by Knapp is not to be overlooked; that is, to introduce the nozzle within the corneal section, so that the liquid will run from within out. This is disregarded by some, but it seems to me that there is an element of danger in washing septic matter into the wound.

The second plan, that of artificially ripening the lens, has many followers: Föerster, McHardy, Noyes, and others. There are six different ways of accomplishing it:

First.—Simple division of the anterior capsule.

Second.—Division of anterior capsule and iridectomy.

Third.—Division of anterior capsule and external massage.

Fourth.—Simple paracentesis and external massage.

Fifth.—Iridectomy and external massage (Föerster's operation.)

Sixth.—Iridectomy and internal massage.

As the mere mention of these methods so clearly indicates the work to be done, a fuller description seems unnecessary.

In operating upon mature or nearly mature cataracts, the first thing to be decided upon is, shall an iridectomy be performed? The profession are still divided on this point. Simple extraction, however, now has the lead, and certainly is the ideal operation. With a section well in the corneal tissue, prolapse of the iris—the chief danger—is not a common complication. In extractions, with an iridectomy, prolapse of the iris into the angles of the wound is nearly as frequent. Preliminary iridectomy still has its advocates, and it would be hard to furnish better visual results than they are able to present.

No one method of operating will be adapted to all cases. We should never sacrifice the best visual results for the sake of cosmetic appearances. Simple extraction followed by secondary capsulotomy combines cosmetic effects with good, visual acuteness. There are, however, many cases of cataracts associated with myopia or slightly increased tension, in which iridectomy gives the better results.

There is one feature of simple extraction which has been of interest to me. Formerly I always used Eserine, a one-half or one per cent. solution immediately after the delivery of the lens. I have of late largely discarded it. Prolapse of the iris rarely occurs, less iritis follows, and fewer adhesions between the iris and capsule re-

main. When I employ Eserine now, I apply only a one-fourth per per cent. solution. This causes less irritation. I should be pleased to know the experience of the members present regarding their treatment of a prolapsed iris. Some claim to have been able by gentle manipulation to replace it within the anterior chamber: others absoise it at once; and Dr. Knapp allows it to remain ten days or longer before absoising, unless it occurs during the first twenty-four hours after the extraction.

Regarding the after-treatment and dressing little need be said here. Nearly every oculist seems to have a method peculiarly his own. The tendency is markedly toward more freedom for the patient and more simple dressings for the eye. Some have gone to the very extreme and practically abandoned the idea of any after-treatment.

During the past few years a number of interesting modifications of cataract extraction have appeared, and in conclusion I will briefly bring to your attention some of them.

Dr. F. Parke Lewis divides the posterior capsule immediately after the delivery of the lens. He claims that by so doing, secondary cataracts are less frequent. Dr. Carter adopts the same procedure, claiming that it prevents the development of glaucoma. Both Drs. Tyner and Brockman prefer a preliminary peripheral capsulotomy with a Bowman's stop-needle. Dr. Brockman reports four thousand cases thus operated upon. Galezowski and others open the capsule with the knife after making the first corneal puncture. Suarez De Mendoza introduces a suture into the lips of the section; and J. S. Prout keeps the lids closed by means of a suture. These measures, however, have not received any general adoption.

Finally, careful attention must be given to the division of secondary cataracts. A capsulotomy should be performed as soon as practicable. If delayed too long, the capsule becomes tough and hard to cut. In the prescribing of glasses, Javal's ophthalmometer has been of great service to me. It, more perfectly than any other instrument, shows the changes in the corneal curvature. This facilitates the work of finding the proper astigmatic glass which will give the highest visual result.

Secondary capsulotomy, when necessary, and the prescribing of glasses, are the final steps in the operation for giving sight to a cataract patient. They are the finishing touches upon a piece of work

that has been skillfully and delicately wrought, and without which all that has preceded may be of no avail.

Discussion.

B. B. Vietz, M.D.: *Cocaine.*—Of course all appreciate its worth. The strength of the solution to use, and the dangers of the drug are points that interest us and about which any discussion can be raised. For the first two years after cocaine came into use, I used a four-grain solution only in all operations about the eye. Enucleation was painlessly performed in two cases, iridectomy many times, etc., and I am not yet entirely convinced but that the effect of a weak solution, everything considered, is as satisfactory as when a stronger one is used. If then, a four-grain solution produces anæsthesia so completely, surely a two per cent. solution is plenty strong enough for the oculist.

Dangers of Cocaine were not mentioned by the essayist. But the note of alarm is frequently sounded in our journals, one surgeon discarding it entirely in throat work. The dangers, I think, are overestimated, for I have never seen any toxic effects whatever, and have used a 10 per cent. solution in operations about the nose and throat.

Antisepsis.—Dr. Bissell states that "cleanliness secured and maintained without the use of germicidal agents is the superior method." I am fully in accord with this declaration. I take issue with the Doctor, however, upon the method he suggests for preparing our instruments. I do not believe it is necessary to take so much trouble and precaution. He puts them, he says, first into boiling water and alcohol; then transfers them to a sterilizer, where for an hour they are sterilized together with all solutions to be used. I confess to being very unscientific when it comes to the matter of antisepsis.

In eye surgery my practice has been to wash my hands, wipe the instruments with absorbent cotton, have the patient's face washed and cheek, lid and brow wiped with cotton. The cocaine solution I make myself in small quantities using always hydrant water. In eight years' private hospital and college clinic practice, I have yet to see suppuration in a single case or bad effects that could be traced, remotely even, to germinal influence. I do not wish to be understood as advocating carelessness. Reasonable precautions should be taken in every case; but this striving after perfect antisepsis is, to my mind, a useless waste of time and energy. Careless handling, bruising of parts during operations, has much to do with causing suppuration.

Surgical Interference in Heterophoria.—It is the consensus of opinion, I think, that high degrees of heterophoria, especially exophoria, can be cured by complete tenotomy, also that many cases of

low degree get relief by systematic exercising of the muscles with prism. What to do with the medium grades is as yet, with me, an unsolved problem. I have nothing satisfactory to offer on the subject. Unfortunately, I have seen so many cases operated upon by others where the condition was actually made worse, or at best not benefited, that it has deterred me from experimenting to any extent.

Strabismus Operations.—The advancement of a muscle. In my library there are works on the eye by thirteen different authors. In describing this operation, all say substantially the same thing, only that some recommend two sutures, some three or more. But all claim that a diverging eye can be brought into position and held there by passing the sutures through the flap of conjunctiva only, at the margin of the cornea. Utter failure was the record of my efforts to advance a muscle in bad cases of divergence, until I learned how to make the operation. But not a hint is given in these thirteen books mentioned of the necessary proceedings to ensure success. And that is the method of Dr. Wray, mentioned in the paper. One end of the sutures must be secured to the stump of the tendon at its insertion into the sclerotic to relieve the strain upon the conjunctiva or the sutures will tear out. Ninety-five per cent. of the operations for advancement are made upon the internal rectus, and usually upon adults. The eye seems to have become almost fixed in this position, and considerable power must be exerted to bring it into place, much more in my experience than the thin delicate conjunctiva is capable of sustaining.

Immature Cataracts—Artificial ripening of the lens. My experience leads me to declare against the procedure, from the fact that I have been unable to accomplish anything of the kind. The growth or formation of a senile cataract is a physiological progressive sclerosis. That of soft cataract is a regressive metamorphosis, different processes entirely. It is true that you may puncture the anterior capsule, perform iridectomy or institute any of the proceedures mentioned in the paper and set up this regressive process, and any transparent portions of a lens in a very short time will become opaque. But this portion artificially ripened is no harder than before, no more easy to operate upon for removal. It is possible that this cortical, opaque, pasty mass might harden if left long enough, though I have waited a year and upon removal found no evidence of any hardening. I make no further attempt to artificially ripen a senile cataract.

Dr. Vilas: In undertaking to discuss the paper of Dr. Bissell, I am embarrassed at the outset in that direction by a hearty concurrence in nearly all contained therein. Moreover, on so vast a subject, so well treated by the essayist, I can hope to shed no additional light, but perhaps may emphasize some of the points made.

It seems to me that if I were asked to name the greatest aid to

the ophthalmologist supplied during the time I have practiced ophthalmology, I should answer the present use of cocaine. It has altered the whole course of professional life of an oculist, while to those who are constantly in the surgical arena it has proved invaluable. I shall not dwell on the reasons for this warm encomium, because its advantages have been well set forth by the essayist, in whose method of use I concur. It requires a little experience to get its best effects, however, even with the method given. Were I not confined to its surgical aspect, much more concerning its use might be said.

The attention which anti- and asepsis has attracted can only be for the best interests of the profession, and yet I am of the opinion that reputations have been made by many of the special procedures connected therewith, only to quickly pass away. In my judgment absolute cleanliness secured and maintained by the simplest methods, is the result to be sought after; and I cannot but believe that too much and too careful irrigating and drenching of the eye, internally and externally, is on the whole not only unnecessary, but often harmful. Too much care to the sterilization of instruments, lotions, and all adjuvants to an operation, and to the cleanliness of the patient and operator, can hardly be given, however; and it is oftener that the result is affected by neglect of this precaution than from apparently injurious pathological surroundings.

In my own practice I also prefer to combat the dangers which may arise from an immature lens in a cataract extraction, than to attempt to artificially ripen it; and yet, unless some excellent reason (one almost imperative) compels, I prefer to forego the operation rather than to tempt disaster by too boldly attacking a lens which seems not yet fully ready for successful delivery.

With the exception of the conclusions as to the results of operations for heterophoria, which I consider too optimistic, I agree in the main with the balance of the paper—all of which is a valuable contribution to our proceedings.

Dr. Randall: I have seen a little in some of the journals in regard to Phenic Acid obviating the systemic affection. I would like to know if any one has had any experience with that agent?

Harold Wilson, M.D., of Detroit: I wish to mention an operation for convergent strabismus, which, although perhaps not altogether novel, has not to my knowledge been brought particularly to the knowledge of the profession. It is an operation which I have derived from my father, and from what source he obtained it I do not know, but I have used it for some time. It consists, briefly, in making two incisions through the conjunctiva, one parallel to the lower border, and one parallel to the upper border of the rectus muscle. The conjunctiva or the sub-conjunctival tissue is then dissected up with scissors back under the caruncle, and as far later-

ally as may be desired. The hook is then introduced under the muscle through one of these incisions, and the point brought out through the other. The muscle is then severed. If further correction is desired, lateral incisions into the capsule may be made. The advantages of the operation are the slight disfigurement and no (or very little) retraction of the caruncle.

F. Parke Lewis, M D.: Just a word about the use of stronger cocaine in lowering the vision of the eye in the extraction of cataract, in four-grain solution, continued for ten or fifteen minutes. I believe that a certain amount of elasticity is necessary in the lens, and if, after using your cocaine ten minutes or more, you find all the elasticity is gone, and you have to squeeze the lens out, you very seriously imperil the result of the operation. I thoroughly agree in limiting the time for the use of cocaine in extracting the cataract. I very often use the cocaine two to four minutes; it is quite enough. During the last year I have several times made operations, in one instance with very peculiar results. The patient, an old man with the lens so far matured as to make reading impossible, and locomotion difficult; after having made an operation the patient was told to come back in three or four weeks and have the lens removed. Not doing so after two months, inquiry was made, and it was found the operation had cured the lens in such a degree as to make it possible for him to read. No operation was, of course, necessary; he could easily get around, and could read large print. It was rather a uniqne instance, and worth putting on record. In regard to the immediate capsulotomy, which Dr. Bissell has referred to: while I was not aware, at the time I first made it, that it had been made by others, I subsequently learned by conversation with Dr. Knapp, that the same operation had been made, and had been discontinued. The completing of an operation at one time is to me an important matter. The patient may come fifty, one hundred, or two hundred miles to have an extraction made. If you can finish the operation at the time the patient is convalescing, it is a very important thing, and it does not necessitate any long operation. Moreover, the division of the capsule is in some instances followed by a general inflammatory condition. It is by no means a simple operation, or one devoid of danger. If, therefore, you can complete your operation at the time corneal incision is made and the lens removed without adding to the danger of your operation, you have added enormously to the value of your primary operation. Since the matter to which Dr. Bissell has referred, I have many times made this immediate capsulotomy, and have had no reason to regret it. I believe it to be an entirely safe operation. So long as we have the iris in proper position, we may open the posterior capsule allowing the vitreous to go into the anterior chamber with no serious results. When the support is taken off, then an

element of danger is introduced. There has sometimes been a little loss of vitreous, a loss not sufficient to imperil the operation, but to make me feel like going no further.

A. B. Norton, M.D.: I would like to add a suggestion as to what to do with those medium cases of exophoria. I want to reiterate the benefit, the improvement of leaving off your convex glasses in those cases of exophoria. I find, over and over again, cases where they have been wearing glasses, and have been treating for it. Leave off convex glass, and the exophoria soon disappears. In other cases, where they are not wearing those glasses, I think they should put on prisms. Let them have a prism to wear. Treat the muscles, strengthen the internal recti up to 70 degrees power, and if that does not correct the power, let them wear prisms, and later, in the higher degrees. If necessary, I am willing to operate. The operation which Dr. Wilson spoke of, for squint, seems to me to be like that of sub-conjunctivitis in the text-books. In regard to one of the Doctor's questions about tannin, I will say that I do frequently use it, one to two hundred or five hundred. I use it very frequently, drop it into the eye every hour or two hours, and believe the essential value of it is found very frequently.

Dr. Bissell, in closing the discussion, said: The question has been asked me regarding the special preparation of cocaine. I have had no special connection with it, and have not seen it used in our work. I do not think it is superior to any other anæsthetic agents that we have, and it is unpleasant to use, in soiling the clothing and staining, although it may be used. I think in one or two cases it has acted unfavorably, seemingly aggravating the case, and was probably used too strong; but I immediately discarded it and took something else.

Regarding the operation for strabismus spoken of by Dr. Wilson, I should have given him the credit for it if I had known that it was peculiar to him. The first operation that I ever saw of the kind was not done by Dr. Wilson, and the only modification I make is a suture I put in, which has certainly given me wonderful results. In that respect it differs from Dr. Wilson's, if he is really the originator of it.

THE STUDY AND CORRECTION OF HETEROPHORIA.

By Harold Wilson, M.D., Detroit, Mich.

Heterophoria may be defined as that condition in which binocular vision, being temporarily suspended, the visual lines of the two eyes do not intersect at the point of fixation. It is characterized by a change in the innervation of the ocular muscles when the binocular fusion of images is prevented. Under normal conditions, binocular vision for a given point is maintained by the co-ordinate action of the entire group of these muscles, and in the ideal eye, at least within certain limits, the innervation of these muscles is not a necessary function of the binocular act. That is to say, the binocular fusion of images being suspended, the innervation remains unaltered. It becomes a function of this act only in states of heterophoria.

Heterophoria is due essentially to a condition of faulty innervation, which depends upon one or more of the following factors:

1. The form and position of the eyeballs (orbits).
2. The place of insertion of the ocular muscles.
3. The essential and relative power of the ocular muscles (amplitude of convergence).
4. The ratio of the positive and negative portions of the relative accommodation, together with the ratio of the convergence and accommodation for the point in question.

Under the first head it is clear that, assuming certain ratios of tension among the muscles of the eye as normal when fixing some point at a given distance from the eye, such as 1 m. for example, these ratios must vary with the length of the basal line of the eyes. For at this distance, with a basal line of 50 mm., the angle of convergence is 1.43°, while with a basal line of 75 mm. it is 2.15°. In high degrees of myopia the alterations in the form of the eyeballs limit their mobility, and, consequently, modify the convergence tension of the muscles.

There is some variation in the place of insertion of the ocular muscles. Stilling has observed a wide variation in that of the superior oblique. We may assume as normal the following measurements, representing the distances of the insertion of the recti muscles from the cornea (Fuchs):

	mm.
Rectus internus,	5.5
" externus,	6.9
" inferior,	6.5
" superior,	7.7

In an eye where the muscular balance is ordinarily good, one or more muscles may become weakened by fatigue or disease, necessitating an increase in the amount of nervous stimulus to these muscles in order to preserve binocular vision. Under these circumstances, if binocular vision becomes abrogated, heterophoria is an easy and necessary consequence. Here we have true "muscular insufficiency."

From the essential connection of accommodation and convergence, it is evident that the ratio of the positive and negative portions of the relative accommodation for any given point has an important bearing upon the muscular balance for that point. Indeed, if no other factor were operative to affect the muscular equilibrium, it seems reasonable to assume that it could be calculated from a knowledge of the relative accommodation. However, as a matter of fact, other causes uniformly do exert an influence upon the position of the eyes, and moreover may be of such moment that their effects entirely negative that of the relative accommodation.

We see, then, that heterophoria may originate in a number of ways. From the variety of causes we may infer that there must be a corresponding variation in the treatment of this disorder. We shall revert to this further on.

Methods of Examination.—In ascertaining the amount and character of the heterophoria present in a given case, the essential determination to be made is the position of the non-fixing or deviating eye. The common and most exact methods of making this determination are subjective. Of objective methods, the only one that is practical is the old test of alternately covering and uncovering one eye with a screen. This is too crude to be of much value. Subjective methods depend upon the uniformity and congruity of retinal

projection. The first instrument of precision for making the necessary measurements was Stevens's phorometer. With this instrument, supposing the patient to be of ordinary intelligence, it is possible to measure deviations of the eyes in any plane with much accuracy. The substitution of a "stopped" convex lens of short focus for the vertical and horizontal prisms employed in the phorometer, added to the rapidity with which a diagnosis as to the character of the deviation could be made. The "rod test" of Maddox marked another gain in the rapidity of the examination, and made it possible to measure the deviation of the non-fixing eye by means of scales drawn upon the wall of the examining-room. Burnett's use of a strong convex cylinder was based upon the same principle. Another gain in convenience and precision was the introduction of the rotating prisms of Stevens, by which the separate displacing prisms were done away with. I have added another instrument to this number, a rough model of which I have the pleasure of exhibiting to this section. It consists essentially of a frame, holding upon its right side a cell containing two 6° prisms, with their bases in contact; or a Maddox rod, suitably mounted; and on the left a "prism mobile" of two 5° prisms, which, by suitable mechanism, may be rotated in the same or in opposite directions, and the amount of rotation measured upon a graduated circle so placed as to be easily seen by the observer. Behind the openings of this frame or slide are clips for holding various accessories, such as abducting or adducting prisms, a red glass, etc. With the double prism in proper position, and the "prism mobile" at 0°, set to give horizontal displacements, the patient looks at the point of light through both openings and sees three images of it. The middle image is seen by the left eye, and by turning the milled head of the "prism mobile" it may be displaced horizontally either to the right or left, from 0° to 10°. If, therefore, this image is not in a straight line with the other two, it may be quickly brought into this position, and the exophoria or esophoria read off at once upon the graduated circle at the patient's left. To measure deviations in any other plane, the double prism is rotated into that plane, the "prism mobile" brought to zero, the small milled head in the face of the instrument pushed well up, and, the pinion of the recording disk being pulled out, the two prisms are rotated by means of this milled head in the same direction to the desired angle, when these adjustments, being reversed, the measurements are made in the same

manner as at first. A little familiarity with the instrument will enable the observer to make these adjustments very rapidly. The Maddox rod may be substituted for the double prism if desired. To measure heterophoria greater than 10°, a supplementary prism may be inserted in the proper position in one of the rear clips, and its value added to the readings of the instrument.

To measure abduction and adduction, or in fact, muscular power in any direction, the double prism or rod is removed from the right-hand cell, and the "prism mobile" having been set in the desired position, the muscular powers can be easily found by rotation of the milled head at the left. In these determinations also, supplementary prisms may be inserted into the clips if necessary.

It will be seen that a considerable variety of measurements may be made by this instrument with rapidity and accuracy. Almost any object of fixation may be used, and at any distance from the eyes. The value of the double prism is, that it is easier to determine whether three points are in the same straight line than whether (as in Stevens's phorometer) two points are in an exactly horizontal or vertical line, as the case may be. I believe that the credit of suggesting this use of the double prism is due to Savage, although the first model of this instrument was made long before his suggestion came under my observation.

So far as accuracy is concerned, there is a substantial agreement in the results obtained by the use of the Stevens phorometer, the rod test, and the little instrument above described. Bissell has made a series of comparisons of the rod and prism tests. In fifty-two cases of heterophoria, the findings of the rod test were greater than those of the prism test in twenty-six, the differences ranging from 0.25 to 4 prism dioptries, from which he concludes that the rod test is the more accurate. I do not believe that this accords with the experience of observers generally.

For the determination of "insufficiencies of the oblique muscles," Savage employs the double prism before one eye, and a horizontal stripe at a distance of eleven inches, as a test object. If there is an insufficiency present, the middle line will run obliquely between the other two, the direction of the obliquity being dependent upon the particular muscle at fault.

Heterophoria may be measured in degrees of refracting angle, or of minimum deviation; in prism dioptries, in metre-angles, or in

centigrades. The most common method is to use the refracting angle of the necessary prism. There is at present, no agreement among oculists as to the most desirable of the various reforms that have been suggested.

Symptoms.—In attempting to enumerate the symptoms of heterophoria, we enter at once upon debatable ground. A wide difference of opinion prevails among physicians as to the symptoms which heterophoria is capable of setting up. On the one hand is a class of enthusiasts who claim for this disorder the power of exciting numerous, remote and profound alterations in the functions of the nervous system, extending its effects to include chorea, epilepsy and insanity. In support of this claim, clinical experience in these affections is set forth, showing that they have sometimes been relieved by proper treatment directed to the heterophoria alone. On the other hand there are those who deny these claims *in toto* and presumably upon scientific grounds. It is difficult to deny the evidence of one's own experience, or that of other competent observers, but it is not always easy to interpret clinical facts. So far as concerns the cure of remote disturbances of the nervous system, such as epilepsy, for example, by the performance of graduated tenotomy, it must be borne in mind that in idiopathic epilepsy at least, patients have often recovered as an apparent result of a variety of surgical operations, such as trepanation without discoverable lesion of the brain or meninges; circumcision for phimosis; the excision of scar-tissue; the removal of bullets, and many other diverse procedures. It is of the greatest importance to observe the fact that there is often a curative influence in a purely indifferent surgical operation. Thus we have recorded cases where, independent of the direct and proper results of the operation, abdominal tumors of considerable size have disappeared after a simple incision of the abdominal walls, and hip-disease has been cured, it is said, by removal of the fore-skin. Even without the hypothetical effects of trauma upon the nutrition, functional and organic diseases have not infrequently, I think, been cured simply by some radical change in the patient's emotional state. My attention has just been called to a case of cataract reported as cured by "Christian Science." From the accumulated evidence now at hand, I believe that hardly more can be affirmed than that these remote neuroses may in rare instances be among the symptoms of heterophoria, but that their claim to such a place has not yet been established beyond cavil.

Seguin has recently given a provisional statement of the symptoms of certain forms of eye-strain. According to this writer, paresis (insufficiency) of the third cerebral nerves and attached muscles (in which condition we may get exophoria or hyperphoria or both) is marked by certain rather definite symptoms, of which he regards occipito-cervical pain and distress as the most characteristic. "The pain," he says, "diurnal, as a rule, and often not appearing until the patient has used his eyes in dressing, eating or reading, is usually greatest between the occipital bone and the second vertebra, though it often extends from the upper part of the occiput to the fourth or even sixth vertebra. It is sometimes more a 'distress' than a true pain, and is often accompanied by sensations of stiffness and tightness ('as if a hand grasped the neck'). There is never, strictly speaking, neuralgia of the occipital nerves, or objective rigidity, as in beginning caries. Tenderness is rarely found, though in women spinal hyperæsthesia (so-called spinal irritation) often coincides. Frequently there is a sensation of weight or downward pressure on the back part of the head, with (usually) intermittent numbness (a 'dead' or 'wooden' feeling) and formication. In some cases the fulness or tightness (cincture or cap feeling) extends to the whole head. Apparent loss of power of attention and concentration (volition) is much complained of, even to a degree simulating mental failure. Reading, writing, sewing, piano practice, conversation, even eating, are painful or unbearable; in other words, the symptoms are increased by any act requiring convergence and accommodation. The prolonged duration of these symptoms, or, rather, of the strain, may lead to neurasthenia, insomnia and a curious mixture of hysteria and hypochondria, so that the diagnosis becomes more obscure. Headache is not rare, but in such cases there are also faults in refraction or other factors. Simple asthenopia, sense of fatigue, or pain in the eyes, orbits, brow or temples, is only occasional, and seldom a prominent symptom. Uusually the patient pretends to have strong eyes."

Payne has recorded a somewhat similar classification, referring the occipital headaches to exophoria and hyperphoria. He adds the additional symptom that these patients show marked inability to use their eyes at night, while their ordinary use in the daytime is comparatively easy. Frontal pain or headache is referred to excessive strain of convergence or accommodation, as in hyperopia and astigmatism.

The symptoms of esophoria are less clearly marked. Seguin

notes, as associated with paresis of the "sixth cerebral nerves," that a sense of confusion, or dizziness, not a true vertigo, is one of the most prominent symptoms. The use of the eyes for distant objects, walking in the streets, contact and business with other persons, attendance at church or in the theatre, sight-seeing, shopping and similar occupations may be productive of great distress to the patient, who feels better when quiet and alone. "Various and peculiar sensations are felt in the head, such as a sense of fulness, 'as if the head would burst;' a downward pressure on the head, diffused or localized, 'as if a stone or sharp stick' pressed on it; a sense of constriction, general or cincture-like; pain in various areas of the scalp; occasional feelings of numbness (a 'dead' or 'wooden' feeling), or of formication or worm-like crawling, also variously distributed; a quasi-tinnitus, or noise in the head (not in the ears) is not rare." (Seguin.)

The symptoms of esophoria are not so characteristic as those of exophoria and hyperphoria, and will be seen to overlap them.

Insomnia and general nervous debility are said to be not uncommon results of continued eye-strain. In the eyeball itself there are reasons to believe that various forms of local inflammatory affections, such as conjunctival hyperæmia, blepharitis, ulcers, etc. (Stevens), may sometimes be indirectly dependent upon eye-strain. Stevens has called attention to certain facial expressions characteristic of the various forms of heterophoria. In esophoria, for example, the brows are compressed, with the inner end curving down toward the nose; lines upon the forehead low. In exophoria the brows are raised or arched; lines upon the forehead high. In hyperphoria the features are more irregular, and one eyebrow is compressed or drawn down, to correspond with the hyperphoria.

Treatment.—Here, again, we enter upon a subject where widely different opinions are held. In approaching the question of treatment we must not fail to bear in mind the various causes which may lie back of the heterophoria. I am convinced that an intelligent appreciation of the causation in a given case, where possible, will often lead to a more just treatment than could be given by any manner of routine. It is true that it is often impossible to ascertain the cause in a given case of heterophoria with any exactness, but even a reasonable inference is highly desirable. Thus, in a case of exophoria due to paresis of the internal recti from general debility or over-

work, it would be manifestly improper to resort to tenotomy for its correction, while if it were due to the anatomical changes in the eyeball incident to a high-grade myopia, the surgical procedure might be eminently proper.

The treatment of heterophoria should begin with the determination of the following points:

1. The amount and character of the heterophoria: *a*, for infinity; *b*, for reading distance: *i.e.*, $\frac{1}{3}$ metre.
2. The mobility of the eyeballs in various directions.
3. The refraction.
4. The muscular power; *a*, adduction; *b*, abduction; *c*, sursumduction; *d*, amplitude of convergence.
5. The relative accommodation; *a*, for infinity; *b*, for reading distance.

The practical value of these determinations is evident. That of the relative accommodation will be necessary or at least useful, in certain cases only. The amplitude of convergence may be determined by means of Landolt's ophthalmo-dynamometer, for its positive, and abducting prisms for its negative portion. The information which it supplies is largely contained in the determinations of the adduction and abduction. Thus if the negative convergence—abduction—in a given case is markedly defective, tenotomy of the internal recti muscles for exophoria would be inadmissible.

Hyperphoria.—Stevens states that the treatment for hyperphoria is tenotomy. This statement is in accord with my own experience. In some cases, where there is an error of refraction requiring the constant use of glasses, a correcting prism may be incorporated with them, and give satisfactory relief. Or with emmetropic eyes, the prism may be mounted in spectacle frames and worn constantly.

It is questionable what internal remedies can do for the relief of hyperphoria. The late Geo. S. Norton, M.D., in 1889, called attention to the provings of Senega and Onosmodium, and their usefulness in affections of the ocular muscles, and reported a number of cases in which these drugs had been used with apparent benefit. The value of Senega in hyperphoria has been made the subject of a recent communication by Linnell, but as I have elsewhere endeavored to show,* the usefulness of the remedy in this disorder is by no means proven

* *Jour. O., O. and L.*, April, 1893.

by the cases related. Indeed, the provings of Senega do not show any special adaptability of the drug to hyperphoria, so far as we understand the symptoms of this affection. Nevertheless, it might have an empirical or clinical value, but the evidence even here is defective. Norton says that the symptoms calling for Senega, are "dull, tired, aching, pressing pains in the eyes, or throughout the whole head, with smarting and burning in the eyes, always worse after using them and often accompanied by catarrhal symptoms of the conjunctiva."

Onosmodium has many symptoms of heterophoria in its proving, *e.g.*, occipital headache; a dull aching pain extending down the back of the neck, or over one side of the head, generally the left; vertigo, with strained or stiff sensation in the eyes, aggravated by use of the eyes for near work. Gelsemium has a transient vertical diplopia, and may be of value in those cases of hyperphoria accompanied with the paretic or other characteristic symptoms of the remedy. Stramonium shows a marked vertical diplopia in its provings. The importance of this symptom in the proving of a drug, is simply that it indicates that the drug has a direct influence upon these muscles which are concerned in the production of hyperphoria. We do not find diplopia (unless it be transitory) in heterophoria. But as a drug-symptom, diplopia is an indication that the remedy has an action along the line in which we seek for curative effects, and suggests that it may possess valuable therapeutic properties in the treatment of affections of the upward and downward-turning muscles of the eyes. So far as the applicability of these or other drugs to the cure of hyperphoria, is concerned, the evidence in their favor, is at the best, obscured by the fact that in almost all of the cases reported, other treatment than the medicinal was given the patient, so that the action of the remedy is not clearly shown. Norton, himself, limits all attempts at a cure by remedies to hyperphoria of less than 2°. In higher degrees, an immediate tenotomy was advised.

Systematic exercise of the affected muscles by means of prisms, has been used and recommended as a cure for hyperphoria, and the clinical evidence in our hands is favorable to its usefulness. In hyperphoria of 1° and perhaps 2°, if persisted in, it may effect a cure, but in higher degrees it does not seem to be of much value.

In a case where there is a manifest hyperphoria of say 1°, circum-

stances often suggest that there is an additional amount that is latent, and a correcting prism is prescribed, to be worn constantly, for the purpose of revealing this latent defect. Under these circumstances, in many instances, the daily examination will show an apparent increase in the hyperphoria, until we may have developed in the course of a week, beginning with 1°, as much as 5° or more. This final amount is then accepted as the total of the real hyperphoria present, and made the basis of an operative correction. Now while it may happen that latent hyperphoria can be made manifest in this way in some instances, we must not lose sight of the fact that under the constant influence of a prism, the normal equilibrium of the eyes will often be temporarily changed so as to generate a species of false heterophoria. Thus it is possible to produce at will exophoria or esophoria in the same eyes, by wearing prisms with the base in or out, as the case may be, and either right or left hyperphoria, as we please, in a similar manner. The heterophoria thus produced is of variable duration, but always temporary. It may not be possible always to distinguish between the factitious and the real defect. The increased relief of concomitant symptoms, by the corrected increase in the manifest heterophoria, if it occurs, or the greater permanency of the disordered equilibrium, might serve as distinguishing marks, but if we accept as the true state of muscular equilibrium, that shown while the eyes are under the influence of prisms constantly worn, we are treading upon dangerous ground, and if it is taken as the guide to the extent of the operation, we are apt to afflict our patients with an over-correction.

With regard to the details of the operation itself, I have little to say, except that in tenotomy of the rectus superior, care must be taken to make the incision high enough, so that the tendon of the muscle will lie in the wound. Rather than to fail in this respect, the operator should measure the necessary eight mm. from the corneal margin with exactness. In my experience, complete section of the tendon is often required for the correction of even low degrees of hyperphoria. The lid retractor, held by an assistant is much more comfortable for the patient than the spring speculum. At the end of the operation, the correction should be as nearly perfect as possible. If an over-correction is made, an appropriate advancement is easily done.

Exophoria and Esophoria.—As in the treatment of hyperphoria,

we have here a variety of methods to choose from; surgical, gymnastic, hygienic and medicinal. As indicated above, we are to be guided by the causes lying back of the particular troubles in question, so far as we are able to discover them. There is associated with most cases of disturbed muscular equilibrium a defective ratio of abduction and adduction, as well as positive deficiencies in muscular power. Thus in a typical case of exophoria, we may find that the adduction is abnormally low, or the abduction excessively high. In the exceptional and irregular cases this does not obtain. We may have exophoria with an adduction of 40° or 50.° Or there may be exophoria in remote vision and esophoria for the near point; or the reverse may be true. Out of two hundred and twenty-nine cases of exophoria, Norton found ten with esophoria in accommodation; in one hundred and fifty-eight cases of esophoria there were sixty-eight with exophoria in accommodation. These atypical cases are credited to the disturbing influence of hyperphoria, and the recommendation is made to correct this before undertaking the correction of the lateral disturbances. In some cases clinical experience seems to justify this assumption. Upon theoretical grounds however, there would not seem to be any satisfactory explanation of what we may call "crossed heterophoria," in a faulty innervation of the superior or inferior recti muscles. It is true that there is a slightly increased tension of these muscles in the act of convergence, but this seems hardly enough to account for the abnormal conditions so frequently met with. As I have elsewhere suggested, a more rational and satisfactory explanation of "crossed heterophoria" may be found in the relations between accommodation and convergence. If we have a case of slight esophoria in remote vision, for example, it is easy to conceive that in convergence for the near point, exophoria might result from an enfeebled power of accommodation, by which the added stimulus of the accommodative act was not adequate to maintain the necessary convergence. This is easily shown in an experimental way, by observing the effect of convex and concave glasses upon the position of equilibrium of the eyes in fixation for the near point. If we have orthophoria, or a low degree of esophoria for distance, we can obtain exophoria at the near point, by decreasing the amount of accommodation in use for that point by means of convex glasses. Exophoria may be transformed into esophoria or into orthophoria in a like manner, by means of concave

glasses. These experiments show very clearly the ease with which "crossed heterophoria" may be explained independently of a real or hypothetical hyperphoria. They also suggest a possible method of treatment in some cases by such exercise of the accommodation as will increase its positive range. Clinical experience to justify this suggestion is wanting, as cases entirely appropriate to it have not come under my observation since the idea occurred to me. I am satisfied however, that the key to the explanation and treatment of a good many puzzling cases of heterophoria will be found in a study of the relations between the accommodation and convergence, and in the relative amplitude of accommodation.

Tenotomy of the stronger muscle after the method of Stevens is a familiar method of treatment. The extent of the operation is determined by the amplitude of convergence. If we have exophoria with subnormal abduction for the far point, it will be improper to tenotomize the already weak muscles. In fact, it may be laid down as a general rule, that a tenotomy is indicated in exophoria only when there is an absolute or relatively excessive abduction. In the contradictory cases, the treatment must first be directed to increasing the power of the weak muscles, and of the accommodation, if necessary. If there is hyperphoria present, it may be relieved. The immediate effects of a tenotomy upon the lateral muscles may exceed the final effect desired by 1° or 2.° It is highly important that the operation be made with the least possible disturbance of the tissues surrounding the muscle, so that there may be as little restriction of motion following it as is consistent with the correction of the heterophoria. The patient will commonly complain of diplopia in looking to the extreme limit of the field in the direction of the tenotomized muscle, and it may be many months, or even a year or two before this will disappear. If the operation has not been too extensive, normal mobility will be eventually recovered.

In many cases of lateral heterophoria, a tenotomy is unnecessary. The muscular balance, when but slightly deranged, will often be restored by the gymnastic use of prisms. This method of treatment will require numerous and frequent sittings. I prefer to add to the office treatments the gymnastic use of prisms by the patient several minutes daily, increasing the strength of the prism as the adduction or abduction becomes greater. This exercise with prisms is to be recommended in all cases where the convergence is abnormal, even

though an operation be in view, and should be continued until as nearly a normal balance of power as possible is secured.

Therapeutics—The sphere of action of remedies in the treatment of heterophoria is not well defined. The reason for this, lies in the fact already alluded to, that specialists are usually unwilling to restrict themselves to internal medication, but must correct by mechanical or surgical, or by other accessory means, obvious defects in the eyes. Thus errors of refraction and accommodation must be corrected, and the use of systematic exercise and electricity are at least very common accompaniments of the indicated remedy. This compounding of remedial measures, together with the somewhat uncertain knowledge in our possession as to the natural history of eye strain, combine to increase the skepticism in the value of drugs, which the specialist seems naturally to possess. Speaking simply from my own experience, candor compels me to say that evidences of beneficial effects from medicine in heterophoria are very obscure. Still there are many men in our school who think otherwise, and this failure on my part may be a personal fault. Even among those who are the most sanguine in the use of remedies, however, it is fair to say that their employment is made to play a secondary part to the other methods we have considered. They are held to be useful adjuvants, rather that the principal factors in the cure, and are often resorted to, chiefly when other means have failed. It is far from my intention to disparage the use of internal remedies in the treatment of ocular disorders, and certainly when we are called upon to avail ourselves of their help, our law of therapeutics gives us the most satisfactory guide; yet it cannot be denied that surgical, mechanical and empirical local and constitutional methods are the stock-in-trade of the great majority of even those oculists who call themselves "homœopaths." If it were less so, perhaps it would be better, but we are called upon to face the facts as they are, not as we think they ought to be. If we have any better success in the practice of any branch of medicine than our Old-School colleagues, it is due directly or indirectly to our law of therapeutics. We cannot afford then, to indulge in too much skepticism as to the value of drugs.

Of the remedies likely to be of benefit in heterophoria, the following may be mentioned as among the most important: Onosmodium, Gels., Senega, Stram., Bry., Phos., Natr. mur., Ruta., Calc. phos., Argent. nit.

Discussion.

John E. Payne, M.D.: This admirable paper has so covered the ground of our present knowledge of this subject as to leave but little opportunity for other than a statement of our individual experience in such cases. That heterophoria does exist there can be no doubt, but tests of positive demonstration have been so inadequate as to deter the cautious observer from the application of any remedy that can not be readily annulled should occasion demand. We will look forward with much expectancy to the workings of Dr. Wilson's improved instrument, a description of which he has been so kind as to give us. All prism tests heretofore devised have had the disadvantage of being inaccurate when used over strong convex or concave lenses improperly centered. Rapid work is manifestly impossible under these conditions, especially when testing for small degrees of heterophoria. A strong cylinder lens decentered in the meridian of its greatest curvature may upset all our elaborate measurements, and lead us into errors of treatment.

We know that the persistent use of prisms has power to induce simulated heterophoria; why not therefore the same of strong convex or concave spherical or cylinder lenses improperly centered. As a preliminary therefore to all tests for heterophoria we must make accurate adjustments of all lenses correcting errors of refraction. Then as to times for making measurements; I have found that innervation of the recti is greater in early morning and in evening hours, the maximum of control being during the middle of the day. This I have been accustomed to ascribe to the temporary muscular inactivity that is an integral part of our existence after prolonged repose in sleep, in case of the morning hours, and to the fatigue that follows a day's exertion, in the evening hours. I have found a difference of as much as four degrees in exophoria. Surely this must have an important bearing on our final diagnosis. Again, who can say from our present methods of examination that a case of heterophoria that presents itself to us is not quite as much due to a *spasm* of one of the recti muscles as to an insufficiency, or innervation, of its opponent? My experience would lead me to suppose that such is the fact in some cases at least, if not in a majority. During my early study of heterophoria I had occasion to operate on several cases of exophoria, and to my surprise I found that a very careful tenotomy performed on one of these by the Stevens' method (without the use of strabismus hook, and making the conjunctival opening very small and exactly over the tendinous insertion) was followed by a swinging in of the eye to an over-*convergence* of 16 degrees from an over-*divergence* of 10 degrees, and by a decided diplopia. The eye seemed literally to "snap" inwards, such force was used by the internus. This case presented, previous to the operation, a very limited adduction with an exaggerated abduction. I have since had the experience repeated. If the trouble had been due to an innervation

of the internus, as, previous to the operation, I had supposed it to be, whence came its sudden accession of strength when freed from the restraint of its opponent? It seems more reasonable to ascribe the whole trouble to a tonic spasm of the externus, causing limited adduction and decided exophoria, than to place it in the usual category of weakened interni. These cases also suggest that our present methods of testing the actual strength of the muscles are misleading, and that a limited *ad*duction or a limited *ab*duction are merely such relatively, and not sufficiently positive in demonstration of individual strength as to allow us to apply such radical treatment as tenotomy.

Dr. Wilson has mentioned Dr. Seguin's observation of a "quasi-tinnitus, or noise in the head," accompanying esophoria due to "paresis of the 6th cerebral nerves." I can bear testimony to a like experience, in two cases of exophoria. In these, the noise was described as a singing, like crickets or grasshoppers in a field, apparently located in the ears themselves, and coming on after prolonged use of the eyes. One patient said that he considered the advent of this symptom a warning to desist from the use of his eyes, which, if neglected, would result in a severe *occipital* headache the following day. An examination of his tympanic membranes disclosed a progressive subacute catarrh of the tympanic cavity and membrane, with some thickening of the latter, and a perceptible diminution of the acuteness of hearing. The other case was not examined with reference to this.

Regarding treatment, my experience has not as yet led me to place much reliance in the efficacy of internal medication, but rather to prefer mechanical methods, such as prisms and gymnastic exercises, combined with general hygienic measures. The use of low degrees of prisms (the 1° or the 2° before each eye) in exophoria and in esophoria, even in high degrees of aberration, combined with gymnastic exercise at intervals of two to three days, under personal observation and manipulation, has done more than anything else to secure a restoration of painless vision to the patient. Prisms of high degree do not accomplish more in such cases, and they eventually become an element of dependence that will, in the end, cause an exaggeration of the symptoms.

Permit me to call your attention to a Homœopathic remedy that I do not find mentioned in Dr. Wilson's list, but which I have found useful in cases of hyperopic astigmatism combined with various forms of heterophoria; I refer to *Santonine*. The special symptoms calling for its exhibition seem to be: A flickering before the eyes; objects seem to waver and dance; photophobia and lachrymation; all of which are induced by use of the eyes at close range. It seems to serve in those cases where *Ruta* is indicated, but with the additional symptom of "unsteadiness of objects."

Dr. Linnell: I have listened to Dr. Wilson's paper with very great interest. This matter of muscular errors is one which attracts a great deal of attention in the last few years, and is certainly of much importance. I have given the matter careful attention, and much has been written of the experience of others. I have had the satisfaction of curing several cases of Dr. Stevens's, and he has operated a number of times and left the patient in a worse condition than he was at first. It seems to me that the tendency to operate in these cases is sometimes too great. Surgery is more brilliant than the treatment by internal medication, and I think the tendency is to operate in many cases where a cure could be effected as well by other means. Moreover, it seems more scientific, if, by any means of treatment, or combination of treatment, we can produce two strong muscles, rather than by crippling one muscle to relieve two weaker ones. For that reason it has always been my endeavor to treat these cases by remedies, by suitable exercise, leaving tenotomy as a last resort. Dr. Wilson, in his paper, makes the statement that we are too apt to trust our own experience, even if it is not supported by the experience of other people; and I wish here to simply reiterate and emphasize what I have said elsewhere in regard to the cure of heterophoria by means of internal medication in connection with exercise and electricity. I have treated a great many patients of this kind, and where patients have been willing to persevere for a length of time, I have been able to cure a majority of them. I have seen only a few cases where I considered tenotomy advisable, and the results obtained, even with such operators as Dr. Wilson and Dr. Stevens, makes me still more conservative in this respect. In regard to trusting one's own experience, it is a matter of positive conviction in my mind that certain remedies are helpful in these muscular troubles; and I especially think it true of Senega. I regard Senega as probably the most important remedy in the treatment of hyperphoria. I am in the habit of making careful examination, with various instruments of precision, and keeping an accurate, detailed account every day, watching the progress of results intelligently; and I know, from my own experience—from the records of my books—that hyperphoria can be cured by Senega alone, or by Senega in connection with other treatment; and it does seem to me that this very scientific practice is what we should aim to attain, and that surgical methods should be left to a secondary importance. Of course, I don't mean to say that tenotomy is not the best treatment in some cases, but I don't think it is the treatment for the large majority of cases.

Dr. King: It is not my desire to get between these two gentlemen in this pleasing argument. I agree with both of them in some points, and disagree with them in other points. With reference to the cure of hyperphoria in its various phases by remedies alone or

in connection with systematic exercise and other remedies, such as electricity, etc., I must throw my experience in the balance with Dr. Linnell; that is, I feel satisfied that a number of cases of more or less hyperphoria—not high degrees though, however annoying—are decidedly relievable and curable by means of treatment outside of operation. I don't believe that I can stand up and say that therapeutic treatment alone will cure those cases, because I haven't given it enough attention. I have not had confidence enough, perhaps, to allow my patients to get along with the remedy alone, with anything like a degree of hyperphoria that was practically admissible; but I do use the remedies in connection with exercise and the prism and the currents of electricity also. I have used those methods of treatment alone without electricity, and I have used the treatment with the remedy in similar cases, and I have decided that the remedy assists most positively. I believe that in low degrees the remedy alone will perhaps in many cases relieve; but if the exercise and electricity and what not will hasten the cure, why not apply it? Dr. Wilson says it interferes with scientific decision. If we have certain cases in hospital practice outside of private practice, it may be well to make that experiment.

With reference to the application of remedies, I simply want to make a suggestion—something that I cannot say much as to its actual usefulness; that is, I cannot absolutely tell you that it is helping me much, but I believe it is and I think it is perhaps worth a trial. That is, the application of our remedies for muscular insufficiencies locally, directly to the eye, in the conjunctival sac. Gelsemium two or three times a day, applied externally, helps the patient decidedly. I have used the tincture of Nux vomica in exophoria, and tincture of Senega in the same manner. I have read, and have been told, that it is given in hyperphoria. I am speaking now of the empirical use of these drugs, for in many cases you must prescribe them empirically. It has been suggested to me, in a general way, to use some of our other remedies, and I have taken these means, and I know that I have had some good results by the application locally of Gelsemium. Now, we know, if we instil a solution of Atropia into the eye, and prevent its passage through the caruncula, that we may give a great deal before we obtain constitutional symptoms. We can go further than that. We know that if we inject Atropine into the foot, ankle, knee, etc., we will soon have dilation of the pupil, and it seems to me that in the application of remedies to the eye, if we restrict the action of the remedy to the organ in which it is placed, we can push the remedy much further without obtaining physiological symptoms.

Dr. Stewart: I would like to ask Dr. Wilson how the instrument here compares with the test made by the Stevens' instrument. I believe that may be recognized or called the standard or point of

departure at the present time. There is an instrument of this kind made by Hardy & Co., of Chicago. Those of you who may be interested in this kind of instrument may be glad to know of this other one.

The question of internal remedies calls to my mind two cases, one of exophoria—a symptom of a ball running around in the base of the brain, and it gave the patient so much distress that he did not want any examination and would not put up with it. I, however, got an examination, and found a certain degree of deviation there, and then gave him Kali carb. Later, he came back, and the exophoria wasn't so great. We can get these changes by the use of remedies, but what the drug has to do with it I don't know. Another case: the patient came for an examination for refraction or muscular troubles, and I had given her Crocus, and got relief from that; that is, a diminution in the amount of her trouble, which was also an exophoria.

This brings to my mind Dr. Savage's prisms, placed base to base. A year ago he left that subject in an unsatisfactory condition. He had demonstrated that he could tell with reasonable certainty which oblique muscle of either eye, the inferior or superior, was the weak one, but at that time he did not know any relief for it. However, that was in 1891. A year ago he read a paper before the American Medical Association, in which he says he can with prisms exercise these muscles by putting this prism before one eye with the axis vertical and looking at it in a horizontal line. We see the lines, and, on opening the other eye, we see a third line, and if that third line is situated obliquely to the other two, it shows a deviation of one of the oblique muscles. Of, course, it depends upon which eye is covered or which eye has the prism. Then, by putting that eye on the two-dioptre cylinder (which is quite strong) and revolving it to make that eye open a little more, we are working that muscle which is at fault, and by then turning it up in the other line we can exercise the oblique muscles.

Dr. Chamberlain: I am very much interested in this part of the subject, as I suppose I have had my share of experience in this kind of work, and I know that we do not yet fully understand all the causes that may be at work upon these muscles. We find so many reflex symptoms from other organs which may come under the same influence, especially in the oblique muscles. I have been much interested in this movement. We have a field yet that is somewhat unexplored. I have been using for the last year, nearly, Savage's prism, and following somewhat his methods of relieving eye-strain; that is, I correct by correction of the hyperphoria or the exophoria. In my practice for the last three years I find so many cases that I have not been able to get relief after correcting the astigmatism and other refractive trouble, and looking up carefully the record of the

oblique and recti muscles the patient would still complain of difficulty, and I have been at a loss to account for it, but I believe the trouble is with the oblique muscles. I think we will find, if we study their action carefully, that they are the muscles that govern the eyes, and when we come fully to understand their functions in every way and how to correct them when they are at fault, even as much as the other muscles, we shall make still more progress. I find that a certain class of cases, where there is oblique astigmatism, give me a great deal of trouble. I have very little trouble with the astigmatism if it is an angle of 180° or 190°; but when I get cases of oblique astigmatism, if I am not careful my patient will come back to me, and in that kind of cases we usually study the oblique muscles.

I have been looking up Savage's ideas, and I find some of them pretty good, and think they would bear study. The oblique muscles will bear study, and we will reap reward and very great help in these difficult cases, especially along the line of oblique astigmatism.

Dr. Wilson: I have not very much to say, Mr. Chairman, except this: we must be very careful, in my judgment, to distinguish between empirical and scientific therapeutics. If we do not, we are going to land in a very uncomfortable position from a physiological standpoint at least. Because we have found that certain remedies have been of service to us in the treatment of hyperphoria, we cannot claim that the application of that remedy to that condition is a scientific procedure.

In regard to the question that Dr. Stewart has asked as to the comparison for the results of this apparatus and Dr. Stevens's, it is to be observed that it is precisely the same thing. The mobile principle is a mechanical principle for saving time and to insure accuracy. You can mark the prism at zero up to 10° of infinitesimal gradings. You don't need to go from 1° to 2°, but you can go anything between those degrees with your instrument, as $1\frac{1}{2}$ or $1\frac{1}{4}$ can be recorded, and it can be made fine enough to measure $\frac{1}{100}$ of a degree. I don't know that there is any other point that has been raised that I have not touched.

THE EFFICACY OF THE VIBROMETER IN APPLYING VIBRATORY MASSAGE IN AURAL DISEASES.

By Henry F. Garey, M.D., Baltimore, Md.

Since presenting my paper before the American Institute, in June of last year on "Vibratory Motion as a Method of Massage in Aural Diseases," I have been using an instrument specially devised for that purpose called the "vibrometer." This instrument is in shape like a banjo, and has four strings stretched across its length resting on a bridge, which sets upon a diaphragm. On each side, elevated above the diaphragm and supported by posts, are two horizontal bars, which support the mechanical appliances used for producing the various vibratory motions. This consists in what is called a yoke, in which revolves a shaft connected with the electro-motor by pulley-wheels and a belt. Behind the diaphragm is a shallow air-tight compartment, leading from which are rubber tubes that are inserted in the external auditory canal during treatment, consequently any vibratory motion of the diaphragm, which must necessarily be an inward and a corresponding outward movement, would be exactly reproduced upon the membrana tympani, as the confined air, not being able to escape, will undergo an alternate condensation and rarefication in the external auditory canal.

Every vibratory movement of the strings of the instrument is communicated to the diaphragm by means of the bridge upon which it rests. These strings by varying their tension and length can be regulated to give a high or low rate of vibration as desired, for instance, the heaviest string left at its original length adjusted to a slight tension may make about fifty vibratory motions to the second, while the lightest string on the instrument adjusted to a high tension and clamped down to one-fourth its original length would probably make three thousand vibratory motions to the second.

In the centre of the diaphragm is an attachment which works on

a lever, and when hit by the cam on the revolving shaft lifts the diaphragm to a considerable extent, causing a powerful effect on the membrana tympani. This attachment can be adjusted at four different leverages, which causes a modification or increase of its intensity and can be regulated at from one to twenty-five vibratory movements to the second. This is only used in very bad cases and for not more than five minutes continuously.

The instrument which I have been describing in an improvement on the first manufactured, and as far as I know, is the only one which offers the same facilities for applying this method of massage. The class of patients in my experience who are generally benefited from the first, are those in which the mucous membrane lining the tympanic cavity and Eustachian tubes is in a hypertrophic condition. The membrana tympani are depressed, opaque, and thickened. They usually complain of a stuffed sensation in the ears, with a great deal of tinnitus aurium, and that their hearing is worse during a cold. In cases where the mucous membranes are atrophied with a large external auditory canal perfectly dry and Eustachian tubes patulous, and generally very little tinnitus, this or no other treatment has done very much good in the majority of cases, and in looking over my records I find that only about five per cent. have been relieved, while in the before-mentioned cases the good results reach at least seventy-five per cent. In treating persons, I always select the rate of vibration which corresponds in pitch, if possible, to that caused by the diseased condition of the ears. If there is no tinnitus to guide me, I find whether the patient can hear a high or low sound better; if it is a low sound, a high rate of vibration is used in treatment, and *vice versa*, A point which I would like to explain here is this: It is not necessary that the sound from the instrument should be of the same quality of the tinnitus experienced by the patient, but merely the same pitch. for instance, if a banjo, where one of the strings was adjusted when sounded to produce a certain note, and a musical instrument of any other kind, whose quality of tone was entirely different, was made to sound the same note in a room, the string on the banjo would vibrate in sympathy, which has been proven by experiment, any other note, no matter how loud, would have no effect. Another point is in the way the strings of the vibrometer are set in motion. On the revolving shaft is a wheel projecting from which are metallic picks which hit the string it is adjusted over. It does not make any

difference in the number of vibratory motions per second, whether the string is hit fast or slow, but at the time the string is first hit the intensity is greater than it is just before being hit again, and as the motion of the wheel is perfectly rhythmic, revolving so many times to the second, it has just as good an effect as if the intensity during the fraction of a second did not vary at all. The idea of using vibratory motion, as I have said before, originated within my mind some years ago, and later put into practical operation, and as far as I know, was the first to lay before the profession in a scientific manner, this method of massage.

I have found that when two of the strings upon the vibrometer were regulated in such a way that when both were set in vibration at the same time, producing the sensation of a harmonious sound, the effect in some cases on the tinnitus was especially beneficial, relieving, where the various kinds of vibrations produced by a single string failed. Sub-acute cases of deafness, accompanied by tinnitus aurium, are quickly relieved, as the following case will illustrate:

Mrs. M. Young, married lady, æt. 26, called at my office, April 1, 1893, complaining of partial deafness and tinnitus aurium. She had a stuffed sensation, or as if cotton had been packed in the external auditory canal. She says the tinnitus was so annoying as to prevent sleep. On examination, found considerable retraction of the membrana tympani, and hearing for the watch, on the right side five inches, on the left, seven inches. The Eustachian tubes were partially closed, which made inflation somewhat difficult, giving slight relief. I used several of the vibrations on the different strings without immediate benefit.

April 4th.—She came again, and reported that no improvement had taken place. I again inflated her ears, after which she sat down to the vibrometer. The central attachment was used with considerable force continuously for four minutes, after which she declared that the tinnitus had entirely ceased in the right ear, and greatly modified in the left; the hearing for the watch had increased for both ears to fourteen inches, and the stuffed sensation had almost entirely disappeared. On inspection of the membrana tympani, found them comparatively very slightly retracted. On April 8th, found improvement had continued, when the same treatment was used for three minutes; after which she declared herself completely relieved of the tinnitus and stuffed sensation, with hearing power

fully restored. Saw her again on April 13th, when she declared the good results from last treatment to have still continued.

I find that in the majority of cases, when the strings of the instrument are used it is only necessary to strike them lightly with the friction wheel. In vibrating the heavy string, I generally set the bridge back behind the central attachment, and adjusting the motor in such way that the belt is at a considerable tension, so that the pulley-wheel revolves slowly. I also generally use this adjustment when setting in motion two strings at one time. The principle of this method of treatment embraces two essential features which to my mind makes this system of massage the only scientific one applicable to the membrana tympani and its associate sound-conducting parts. Massage is the application of motion to disease, and its scientific administration consists of its application in a systematic manner. In applying massage in aural diseases, it is necessary to produce a to-and-fro movement of the membrana tympani, and, if possible, by a force which is harmless and at the same time effective. The vibrometer fulfills these conditions. Any of the strings on the instrument that may be set in motion by the friction-wheel, will produce a certain number of vibratory movements to the second of time, and the movements of the central attachment are also measured. What could be more systematic than this? The motions of the membrana tympani were intended by nature to be vibratory, and as the vibrometer generates measured motion, and these motions are vibratory, theoretically we have a scientific and effective method of massage in aural diseases; and, as demonstrated practically by the use of the vibrometer, we have in fact a great scientific advance over all previous methods. Since the introduction of this treatment in aural diseases, it makes possible a more or less benefit in cases of deafness heretofore considered hopeless, and has opened up the field for the treatment of aural diseases to such an extent that the number of deaf patients seeking relief at the aurist's hands will at least double itself.

Discussion.

H. C. Houghton, M.D.: Dr. Garey's admirable paper gives us the description of the vibrometer, an instrument devised under his personal direction and inspection, for the purpose of applying massage to the ear. It is the only instrument of the kind on the market, so far

as I am aware, and after a somewhat prolonged use of it, I am prepared to recommend the latest production of the vibrometer company.

This instrument is a decided improvement over the instrument first sent out, and is capable of producing a most profound effect upon the drum-head and ossicula; indeed, upon the entire auditory apparatus. I am able to confirm Dr. Garey's statement of the effect of high and low vibrations as regards treatment.

I have also been very much interested in the use of stringed or reed instruments for diagnosis, and find that we can detect any abnormal sensitiveness of the auditory nerve to high or low tones. Some patients are extremely sensitive to all tones, high or low; others to high tones and not to low tones; others, conversely. Again, in some instances, there is a peculiar sensitiveness to single tones or to discords produced by sounding the note and half-note at the same time. Under the action of the central attachment of the vibrometer this sensitiveness is modified, the sensitiveness to high tones disappearing and being replaced by a low tone or, conversely, under treatment, a low tone disappears and a high tone is established, temporarily, at least. Again, in cases of recent origin, treatment will substitute an undefined rushing sound for a definite musical tone, either high or low, and later, the treatment will abolish this, the patient being relieved of this intensely annoying symptom. In some cases, with this relief, there is an improvement in the audition; in other cases, no improvement follows.

I confess to the domination of the material over my mind in my earlier experiences with massage, and I think the inclination of operators will be to use a far greater degree of power than is necessary. I therefore notice with great satisfaction Professor Garey's remark, that "the object should be to produce a to-and-fro motion of the membrana tympani, and, if possible, by a force which is harmless and at the same time effective." I would hardly say "to-and-fro motion of the drum-head," because I think that that expression is liable to perpetuate the notion which is fixed in the minds of most physiologists, that the drum-head moves as a whole, with a to-and-fro motion." That is true under the influence of the Politzer, Siegle's otoscope and similar instruments; but it certainly does not so move in the ordinary function of audition, but stands as the iris does in the eye, as an adjustor, a regulator of sound-force; in some sense as the iris does in its relation with the lens, to adjust, regulate and direct the essential force, and the vibration of the drum-head is at every node; every portion receives impressions that are converted into molecular disturbances of varying lengths, according as they are produced upon the stiff and unyielding portions of the drum-head at the periphery, along the manubrium, or in the more attenuated and easily-yielding portions which lie between these two areas. Not only so, but these impulses are communicated to the contained air of

the tympanum, and make their impression upon the acoustic nerve through the round window synchronously with the impression made through the ossicula.

This whole subject widens before my mind in such a way that one might wish himself twenty years younger and at liberty to devote himself to a term of research in acoustics, such as is offered only in the technical schools of the continent of Europe.

Wm. R. King, M.D.: In discussing Dr. Garey's paper I shall begin by saying that his methods have been closely followed by me since the beginning of his experiments, owing to the fact that I have been greatly interested in the treatment of deafness and tinnitus by means of sound waves or by aural massage since 1887, and have experimented and treated many cases by this method since then, though with crude and unsatisfactory instruments. Since using the vibrometer—which, after much study and experimentation, is now presented to the profession in practical shape—I have undoubtedly increased my percentage of good results.

I don't believe I am over-sanguine or carried away by my interest in this method, and believe I can rightly appreciate that this does not offer us a panacea or cure-all for auditory ailments, and hope I may always be ready to see the failures and to strive to find methods or remedies to reach some of them.

In speaking of the application of the instrument, I wish to call attention to the central attachment or post for coarse vibrations. Dr. Garey has not given it as much attention in the paper as it deserves. It is very useful as a general means of aural massage, rougher in nature and more general in application than the strings which help to make up the instrument. I often use it before applying the "similar sound" to a given case, as a species of gymnastics, to stimulate secretion and motion in the conducting apparatus of the ear, viz., membrana tympani and ossicles. In most cases—in fact, in all—where tinnitus is present, I follow this up immediately by the nearest approach to the similar pitch obtainable.

I agree thoroughly with Dr. Garey, that the best results are achieved in cases accompanying hypertrophic catarrh, and that the least benefit is apparent in cases of atrophic nature.

Regarding the method of treatment in the absence of tinnitus, my experience does not coincide with that of the author of the paper entirely; I do not feel that as yet we have any safe rule to guide us. My method has been to try the numerous sounds and variations thereof until I find the one that seems to give the best immediate results, or that the patient himself will speak of as very penetrating and powerful (though not necessarily loud and heavy).

It seems almost impossible at present to simulate all the qualities of tone as they occur in the ears of those suffering with tinnitus; in fact, it would appear to be unnecessary. However, it seems advan-

tageous and quite necessary to secure the closest simulation of pitch, thus in many cases soon obliterating annoying tinnitus and improving hearing powers.

The arrangement permitting of the picking of two strings simultaneously adds decidedly to the usefulness of the instrument, as it increases the range of pitch as well as varying the quality of tones procurable, thereby decidedly enlarging our field of application.

The force used for creating the massage or gymnastics of the membrana tympani and the ossicles—viz., vibratory force or sound—carefully and scientifically applied, is nature's remedy, because it is adapted by nature, and is the only force which can rightly or safely be applied to these delicate portions of this complex organ of hearing.

A startling commentary on this subject is the array of cases *benefited* who have been relegated to the shelf by ancient and modern otology; cases declared unhelpable have been vastly improved. Pray, make no mistake; I did not say *all* cases.

It may be interesting to hear the latest regarding the instrument which was first invented for the application of this method of aural massage. Mr. E. J. Godman, the inventor and patentee, is constantly on the lookout, and always striving for improvements to his machine. He has made many that you all know of. Permit me to report a few so recent they have not yet left the factory.

First.—The machine has been taken from its case, and is now mounted on a solid stand or table of oak, being set below the level, or so that the face of the instrument is just level with the face of the table. This is all supported by rigid, solid metal legs, which absolutely prevent foreign vibrations.

Second.—The motor has been removed from its little shelf and relegated below the table. It can be placed upon a box on the floor, a shelf against the wall, or, better yet, a shelf solidly attached to the metal supports of the table. A belt goes up through an aperture to a wheel on a shaft, the other extremity of which carries a wheel with a rubber tire (a friction wheel), which in its revolution, being in contact with a larger flat-surfaced wheel on the main shaft of the instrument, turns this in harmony with itself. This arrangement does away with the necessity of shifting the motor each time you wish to shift the carriage from one string to another—a consummation to be devoutly thankful for. The removal of the motor from the instrument as at present attached will recommend itself to all who have used the vibrometer, a great amount of undesirable jar being thus avoided.

Third.—Ratchet keys capable of very fine adjustment of tension of strings are now provided for the instrument.

Fourth.—A rheostadt or resistance-coil is now to be placed beneath the table between the storage-battery and the switch, by this means

enabling us to control the speed and number of revolutions to a nicety.

Other, though comparatively minor, improvements are being made, and others are contemplated, as, for instance, the substitution of a roughly corrugated rubber band for the picker on the wheel, thereby getting rid of the metallic sound of the picker on the wire strings.

I have experimented with a number of appliances for the production of the sounds and pitches that I have required, but I always fall back on the vibrometer, especially as at present constructed, for satisfactory work and results.

This instrument may be, and probably is, as yet, in its infancy. It, and the method it applies, can only be perfected by constant work and experimentation both on the part of the profession and of the manufacturers. Each improvement we can suggest, if it only should serve as a means of helping one solitary case, would be well worth our while.

The experiments being made by different methods for treating deafness by sound waves is indicative of the interest the profession has taken in the matter. It is indicative of a lack of something in our usual armamentarium which is greatly longed for by patient and doctor; that is, the means for making the deaf hear and for relieving distressing tinnitus. There has been a dearth in this direction, and perhaps there still is, but I believe fully that we have in aural massage by vibratory force a decided acquisition at our hands.

E. H. Linnell, M.D.: I would simply like to ask Dr. King how long he uses the instrument, and whether he uses it according to the deafness.

Dr. King: Yes, decidedly. In an intense case of deafness I would have to use it a great deal longer. The central attachment I never carry over three or five minutes, and the whole treatment I don't think is ever carried over twenty or twenty-five minutes in one case, and usually averages from ten to fifteen.

Harold Wilson, M.D.: I have only to suggest, what I have elsewhere called attention to, the possibility of another mechanical device for securing vibratory motion. It is well known that in the make and break of a current of electricity, in the circuit of which there is a telephone, we get an influence upon the make and break of the current in the telephone. Now, it is a simple matter with which these makes and breaks are made as to obtaining any number of vibrations that you wish. You may, by a mechanical device of some rotary motion, if you choose, make and break the current as rapidly as you please until you have reached several thousand vibrations a second, or you may even make the vibrations so slow as to be easily counted. The application of this suggestion has been put in force in

my own practice, more or less, in the use of the telephone as connected with the induction-coil of an ordinary battery. The more intense the current, the more intense the sound. You can easily see that it is a mere question of mechanics to secure these two sounds—intensity of vibration and rapidity of vibration. I will say, furthermore, that it has this advantage. There is no noise in the office, which I think is not altogether true of the vibrometer. I would suggest that so far as the vibrometer is concerned, if it could be made to be noiseless to anybody but the patient, it would be a decided improvement. In that respect the telephone is a decided improvement, because there is no noise except to the patient, because the noise is right at the ear of the patient. If I were seeking for a perfected instrument in this line, I would go outside of the banjo idea. As we have the most perfect writing machines, which have no connection with the ordinary method of writing, and sewing machines, which have no connection with sewing by hand, so it occurs to me that possibly the securing of the vibratory motion upon the ears might be obtained in a totally different way from that which you get when you listen to the drum of the guitar or an ordinary musical instrument, and I would suggest that the make and break of a telephone opens a very fruitful field for mechanical experimentation.

H. C. Houghton, M.D.: In my study of this subject I made the acquaintance of Mr. Bernhard, of New York City, who is a personal friend of Mr. Emil Berliner, the inventor of the Emil Berliner Telephone, which is the instrument by which the Bell Telephone Company maintain their monopoly at present. Mr. Berliner is the inventor of the graphophone, and has, I think, covered this whole matter which Dr. Wilson has mentioned. An ordinary Bell telephone receiver is put into the circuit of an ordinary induction machine, and you can use it just as the English people use the audiometer, and as you remove the coil you modify the vibrations, which is covered with another disk and a tube, and that tube covered with a stethoscope tube, which is the same as we use for the phonograph or vibrometer, and, as Dr. Wilson has suggested, you can modify the intensity, and of course the whole matter is adjusted by the fine attachment of the cord, so that you can have fine vibrations. The intensity of the vibrations is regulated by the distance to which you uncover the cord. The only difficulty in the adjustment is that it has been so severe that it is really uncomfortable, and the noise of the instrument is reduced to the minimum for office use.

A. B. Norton, M.D.: I will also add that in regard to the objection Dr. Wilson makes to the noise, there is no doubt it is an annoying thing in the office, and in that line I have some men at work on my suggestion. We are devising another machine, or instrument, which is to be entirely enclosed in a cabinet, so there will be no noise whatever in the room if it is made a success. The idea is a

little crude, and I am quite uncertain whether it will amount to anything or not. Then, in the line of what Dr. King was speaking in regard to Mr. Goodwin—he called, at New York, to see me last week. I made two little suggestions to him, which I think would be in line with his advancement. One is the number of the picks. The present vibrometer has four picks. I suggest the experiment of trying twelve or sixteen picks, which will make a more continuous sound; it may be of some value. Then, in regard to regulating the speed of the machine: you regulate that now by a series of buttons, so as to get three different speeds. We will have a very slight, intermediate speed, and a very rapid speed. My experience with the vibrometer is especially favorable. I think the idea is in the right direction, and it is simply a matter of instrumentation.

THE HOMŒOPATHY OF AURAL THERAPEUTICTS.

By C. F. Sterling, M.D., Detroit, Mich.

It is a cause for extreme regret and deep diappointment that the one man in our school peculiarly fitted, by his long training, his patient study and observation, and his extensive clinical experience, Professor Henry C. Houghton, should have been prevented by illness from the preparation of the paper on this subject which had been originally assigned to him.

As his assistant, working at his side and under his supervision for years at the New York Ophthalmic Hospital, the writer knows, better than most men, his eminent qualifications for the task, and of what the profession are deprived by his inability to undertake it.

The brief notice of a few days in which to prepare and complete an article on so important a subject, for so profound an occasion, is but simple justice to the writer to plead in part extenuation for the crude and incomplete remarks he presents for your consideration.

It is nearly nineteen centuries since the divine lips uttered the words, "He that hath ears to hear, let him hear." Spoken to the scornful and unbelieving Jews as a warning, the words have an application directly physical, and in these days may be construed as a direct command; for the neglect to guard and care for the most valuable of all the special senses, with the modern facilities available, is reprehensible in the highest degree where one is responsible to one's self alone; but the responsibility becomes criminal when the neglect entails upon a child all the disastrous consequences and mental suffering that follow impairment of hearing.

Considering the limitations necessitated by the brief time for preparation, no opportunity for research was available, and it is evident nothing new or startling can be presented. Therefore it seemed that the most practical, and in fact the only possible way to meet the occasion, was by a short statement of the means at our command

for the treatment of morbid conditions of the aural apparatus, and the relations they should bear to each other.

The specialist, as a specialist, will find little of interest, because to him it is well-known ground.

The main point to which I wish to call attention is this: that there are *no* therapeutics (taken in the strict medical sense) which as yet are sufficient in themselves to meet the conditions daily presenting.

I do not say that drugs internally administered have no place, for they are of exceeding value; but this I do say, that he who, in his ardent faith in the all-powerful for-good nature of medicine, and his confidence in his own ability to always administer them accurately, neglects the necessary means of local treatment, will find, in dealing with the ear, that there are many conditions in which the most scientifically prescribed drug will fail to meet the expectation of himself and his patient; while some judicious local measure will give both satisfaction and relief.

Illustratively, our Materia Medica is full of symptoms pertaining to the head and eyes, and a case presents itself of which the perfect similimum is found.

The drug is given, with no relief. Again and again is medicine administered, with the most careful study of the totality of symptoms, and from the tincture to the highest attenuation. Ultimately an oculist is consulted, who finds a refractive error, prescribes the proper glasses—when, lo! all discomfort disappears; all pain is appeased.

Such instances are of too common occurrence to admit of argument.

As the result of the prolonged strain, certain morbid conditions may have arisen, characterized by certain symptoms, which persist after the adjustment of the glasses. For these the proper remedy may be applied with brilliant results. Here the Homœopathic remedy finds its true field.

Analagous to this is the proper sphere of Homœopathic aural therapeutics.

Time and again have patients presented themselves, complaining of deafness and tinnitus, having been drugged for weeks with the "suitable Homœopathic remedy," that have gone from the office in ten minutes with completely restored function, simply by the removal

of a mass of cerumen from the meatus. It is true that the cerumінous accumulation may be due to a morbid condition of the glands, arising from some perverted state of the system. For this, medicinal treatment is applicable; but the patient applied for relief from his discomfort, and he obtained it by a simple local measure—while all the medicine in the pharmacies would not have helped him. Afterwards is the time for administering such suitable remedies as may reach the underlying cause that resulted in filling his ears with the impacted mass.

In the one case, remedies are suitable to relieve the consequences, the cause being removed by local means; in the other, the consequences are relieved by local measures, the cause being treated constitutionally.

I have cited these two conditions purely as illustrations, and my remarks may seem trivial to you, but I am led to make them for these reasons:

Upon the issuance of a small work relating to the ear (in 1885), I used the following words in the preface: "In regard to treatment, I am firmly convinced that we are not yet in a position to dispense with local measures; our therapeutics are yet too meagre in this department."

Certain critics assailed the statement as evidencing a lack of faith in the curative powers of Homœopathy.

Another reason is, the fact that Homœopathy suffers from the indiscreet fanaticism and ignorance of a class, of whom the aforesaid critics are a portion. This class, claiming that the Homœopathic law of cure is sufficient for every morbid condition of the system, pursue with malignity and invective all who do not subscribe to the same views, calling them mongrels, hypocrites, false to the master's teachings, etc. These are they who are responsible for much of the ridicule which Homœopathy has been compelled to endure in spite of its onward march.

In 1876, at Philadelphia, Professor T. P. Wilson, on a similar subject said: "This point needs emphasis, because, we as a school have unfortunately been always handicapped by a class of professed leaders who have boastfully discarded these things, and taught us to rely upon symptomatology."

This ignorance and boastful assertion exists to-day, and it is in an effort to clear the ground, that the true place and value of our

remedies in aural work may be seen that the foregoing remarks have been indulged in.

Coming, then, strictly to the matter in hand, we find ourselves in possession of two classes of resources for reaching and relieving the conditions that present themselves, general and specific. The general means includes all local measures, nutrition, hygiene, sanitation, etc.; the specific, our remedies.

Taking first, one of the most common affections, an earache, an acute aural catarrh, the otitis media catarrhalis acuta of the specialist, what can be done for it?

Certainly, few conditions give rise to more intense pain, and in a certain class, with marked predispositions, repeated attacks lay the foundation for obstinate and intractable consequences. The local measures at command are protection, heat instillations, inflation, blood-letting, and paracentesis.

These are common property, and in any given case we resort to more or less of them.

Now, in the matter of medicine, have we any advantage over our confrères of the Old School? Dr. Roosa says: "The proper treatment of acute aural catarrh is, predominantly, an antiphlogistic one. The disease is an inflammation of the severest form, and can only be successfully combated by such means as blood-letting and Opium." Dr. Burnett says: "Anodynes should be given in doses sufficient to allay pain and produce sleep. *Aconite . . . . is of great value in acute otitis.*"

Many quotations from different authorities could be adduced to the same purport, but the consensus of most of them is the same, viz., reduce the inflammation by local measures, and allay the pain by anodynes.

To this uniform paucity of medicinal resources of the Old-School specialists, there is one notable exception. Dr. Sexton, in speaking of the treatment of acute otitis media, recommends quite an array of Homœopathic remedies—Acon., Hepar., Merc., Puls., etc.,—but then, he is half a Homœopath anyhow.

Let us look, now, at our side of the case. We find an acute local inflammation, with constitutional disturbances, fever, frequently sore throat, etc. Can you not readily picture to yourselves the Aconite type, with its flushed face, high temperature, bounding pulse, restless impatience, anxious tossing, pains sharp and tearing, extreme

sensitiveness to noise, and all the concomitants that make up an Aconite case. So take your list of remedies, and in your imagination you can see the Belladonna case, the Ferrum phos., the Mercurius, the Hepar. sulph., the Pulsatilla, and so on down the line.

I am not going into the details of symptomatology, but merely direct your attention to the contrast between the poverty of their resources, and the richness of our own if but used wisely and intelligently.

Supposing the morbid condition has passed beyond the line of the so-called catarrhal form and has eventuated in suppuration.

In many cases, as you well know, this point seems to mark the climax of the inflammatory action, and resolution follows.

But this by no means ends the difficulty in some instances, even where the membrane becomes repaired. Products of inflammation remain in the tympanum to organize and interfere with the delicate machinery therein.

You as specialists know the importance of the pneumatic speculum and the air-bag, in preventing the development of adhesions and closure of the tube. But you have important aids in your remedies to assist in carrying on the process of resolution by absorption of the remains, and reduction of the swelling and infiltration. Our friends again here show their poverty, unless they trespass upon our bounty. Kali mur., Merc., Puls., the Calcareas, Hepar, Silicia, all stand ready with a helping hand.

But in case resolution does not follow after the suppurative stage is reached and a chronic pyogenic condition is established you are confronted with a serious problem.

Now as a rule it is useless in aural suppuration to depend on internal medication alone, although there are perhaps few conditions more indicative of a perverted systemic state, and showing more need for constitutional treatment. The local conditions must be complied with, and unless this is done, your remedies are of little value.

But after cleaning and dressing the suppurative tract, such remedies as Aurum, Hepar, Mercurius, Silicia, Calcarea, Sulphur, Arsenicum, Lycopodium, come in as powerful levers to so modify the constitutional state that the local measures employed have far greater efficacy, and *vice versa* the local treatment being judiciously used, the medicinal treatment finds fewer obstacles in its way.

A block between two pieces of gearing, disarranges the machinery and limitless fuel and steam does not produce smooth running, but put the local conditions of the machinery in proper order and the motive power does its work.

It is this mutual dependence between local and systemic treatment that I wish to especially emphasize, and thus assign to our specific therapeutics their proper field of action. This argument holds good through all the varied forms of aural pathology that we meet.

Perhaps the most intractable of all is the chronic catarrhal condition. Taking the most advanced form of treatment of the present day, the air-bag, pneumatic speculum, vibrometer, telephonic attachment, surgery of the ossicles, naso-pharyngeal treatment, etc., one is simply removing the blocks in the machinery, and the more perfectly that is done, the clearer is the way for the more satisfactory action of constitutional remedies.

These ideas are not applicable to aural therapeutics only. Throughout the whole range of human pathology the same principle applies, and intelligent practitioners everywhere are recognizing the fact that there is more in treating human ailments, than the suitably selected Homœopathic remedy.

Nutrition, climatic conditions, sanitation, hygiene, general and local, the elimination of mechanical obstacles by mechanical means, are indispensable to the best action of the remedy, and the more quickly this general fact is appreciated by us as a school, and the internecine warfare—as to the size of the dose, the degree of attenuation, who are true and who are false Homœopaths—ceases, the sooner will be ushered in that wished for day, when the law of similia *assigned* to *its proper relations* and *limitations*, will be recognized by the world at large, as offering to suffering humanity its best medicinal aid.

Discussion.

Hayes C. French, M.D.: In the discussion of Dr. Sterling's admirable paper we are not unmindful of the paucity of remedies that have been found, even by our Homœopathic brethren to have any definite or constant affinity for the tissues involved in painful and destructive aural troubles.

Under the classification of general and specific agencies for meeting ear diseases Dr. Sterling says: "The *general means* include all local measures, nutrition, hygiene, sanitation, etc.; the *specifics*, our remedies." To my mind this classification seems indefinite and

unphilosophical. I doubt if many disciples of Hahnemann will be found willing to admit that our remedies are specific in the sense herein implied, from the fact, that the symptomatology that leads to the selection of an efficient remedy for the ear, may be found to have no definite relation to the condition of that organ at the time, but to quite remote ones. In selecting an ear remedy upon its clinical reputation the results seldom justify the appellation of "specific," and if we chose it in response to the totality of the symptoms, whatever may be the result, it could not in harmony with the philosophy of our law of cure be said to be specific to the ear trouble. Again, in acute suppurative otitis, with incarcerated pus in the middle ear, what could be more specific than the relief obtained by the incisive offices of a lancet? And this certainly does not belong to the classification—"our remedies." In all curative ear troubles, due to mechanical causes, experience has taught most of us that the more specific results have usually been obtained by means of mechanical or surgical agencies, and in the domain of prophylaxis the same has been true, as in the example of impacted cerumem cited by the author in his paper. Even in the few remedies for which our Old-School colleagues claim the virtue of specifics, our use of the same agents in accordance with the law of similars has always shown the falsity of the claim and the narrow limitations of the specific action, as for example the demonstration that the action of quinine is after all limited in its antiperiodic efficacy to definite forms of tertian intermittents.

Would that there might be some solid ground on which to found our claims to specific remedies for the painful and often intractable diseases, especially of the middle ear and the labyrinth. It is astonishing what specific results sometimes attend the exercise of a little good "horse sense," even against the general teachings of the books and the professors. In one of our first cases of suppurative otitis media, after cleansing the meatus thoroughly twice a day for two weeks, following the dressing with pledgets of absorbent cotton in the outlet, with no appreciable diminution of the discharge, the mother of the patient blandly suggested that the ear might do better if stopping the canal with cotton were discontinued; and as soon as it could be done without sacrificing the dignity of the doctor, the advice was acted upon to the great benefit of the patient and subsequent advantage to the doctor—loose bandages, allowing free vent to the pus, being substituted.

AURAL THERAPEUTICS.

By Henry C. Houghton, M.D., New York, N. Y.

What Dr. Sterling has written in his admirable paper is correct. The lesson cannot be enforced too strongly. It will be needed as long as our colleagues prescribe potencies, low or high, to meet simple, mechanical conditions. As the devout Moslem, who said he would turn his camel loose and trust God, was rebuked by his Master's reply, "tie the camel and trust God," so we must use every means that modern science has brought to our hands, and then add that greatest vito-chemical factor, the Homœopathic remedy. Still the question in my mind is whether the greater danger lies in the direction of Dr. Sterling's lesson. I am inclined to believe that it lies in the direction of neglect of the vito-chemical for the mechanical. I question, if to-day, we make as many constitutional cures as we did twenty-five years ago. Just at that time my effort and that of my colleagues was to test thoroughly the existing Homœopathic claims made in our literature for the cure of special diseases—the eye and the ear—the clinic of the New York Ophthalmic Hospital having just then been put in our hands, and while I would not, for a moment, disparage the work of our specialists since then or our work of to-day, I believe there has been a retrograde movement during, perhaps, the last ten years.

The question may be asked by my hearers, "what do you mean by constitutional cures; are not 'Old-School' cures constitutional?" Yes, certainly. "Are they not good, satisfactory?" Yes, certainly. "Are ours better?" No, not if they lack the vito-chemical element —the similar. The danger is that we are tempted to abandon the constitutional for the more tangible, because material, surgical, just at the time when Koch is giving us the reason for our faith. Many times, weary along right lines, from ignorance, discouraged, we have deviated, tinkered, until with the use of some individual remedy the difficulties have dissolved as by a charm.

Easy to practice Homœopathy? Absurd! One needs all the wisdom of Humphrey, Dunham and Allen, joined with the intuition of a Grey and the stolidity of a Liebold. The charm that won me to the practice of our art in similars, was the physiological indications. Every salt, every metal that lies in the mould of the earth, every plant that has appropriated the salts of earth and made them living vegetable tissue; every virus that healthy action of lower animals has made a means of defence; every virus that abnormal action of higher animals has made a besom of destruction, has an action that is unique, at once so wonderful for simple study, that it absorbs one, if only on that line, but so much more wonderful if we study those possibilities which lie open before us as we turn to the higher plane of helpfulness for cure of human ills.

Enthusiastic? Of course, we are. Sectarian? Certainly, in the same sense than an enthusiastic geologist, botanist, chemist, may be considered an enthusiastic sectarian; only such are we. What have we to offer to the world that is superior to the mechanical or the constitutional on the old plan? Much every way. Among these metals, salts, plants, etc., that we use largely, some which act not only generally, constitutionally, but by the grace of an all-wise Jehovah, there are some which act as by fiat upon the ears. Not only so, but upon special parts of the ears, special function being thereby conserved; hence, I find ground not only for faith as a medical man, but faith as a Christian when I learned that this world is not a thing of chance.

Let me, then, to enforce my claim, cite a few instances of this special, and if I may be allowed to coin the expression, elective chemico-vital action.

Take the remedy Plantago: what is there about this simple, unobtrusive remedy that would lead one to expect such special action as was demonstrated in the proving made by Francis Humphrey, M.D. This action is unique on the trifacial nerve and related ganglia. The pains are lightning-like twinges, and patients who have had suppurative inflammation of the middle ear, become alarmed at the prospect of a similar experience. The inspection of the drumhead, however, shows it to be absolutely free from hyperæmia. The relation to the dental branches of the trifacial is very interesting, the proving involving not only the ear, but the teeth, both upper and lower maxillary. From the clinical note by the prover, I quote:

"I have for many years used the Plantago sufficiently in various forms of odontalgia, and doubt not this use of the Plantago has been confirmed by all who took part in the proving during these intervening years" (Humphreys).

A unique case may be briefly quoted: Miss S. came to me after suffering for a number of days with most intense earache. Her brother, a physician, feared that she was on the verge of suppurative inflammation. Inspection of the drum-head showed that it was free from any evidences of congestion, and the hearing was normal. I asked as to her care of the teeth, saying that, in all probability, the trouble was due to defective teeth. I was laughed at for my opinion, because the lady had only a few days before had the teeth put in perfect order. I then thought that possibly the dentist might have packed the crown of the teeth too closely and produced pressure. On inspecting the recent work, I noticed two fillings in the lower molar teeth on the left side showed evidence of contact, and asked her to bite on the handle of a cotton-carrier placed between those two fillings. The result was an increase of the neuralgia in the ear, and the laugh was then transferred to the other side of the house. The whole difficulty was obviated by burring down the fillings.

The Plantago is an admirable local application, either to the ear or to the crowns of carious teeth that cause reflex neuralgia. Dr. M., one of my friends of the opposite school, was nearly converted to the study and practice of our faith by the application of the fluid extract to his own ear while suffering from an otitis that involved the canal as well as middle ear. The relief was magical, after various mitigating agents, such as the Magendie solution, had been used.

An interesting comparison may be made between Plantago, Chamomilla and Pulsatilla. The cases of intense neuralgia under the two former remedies are associated with slight hyperæmia, even if they do not pass on to acute inflammation; and the peculiarities of the Chamomilla symptoms, the intense intolerance of pain, and the irritability of the patient, are in decided contrast to the lachrymose and despairing depression of the Pulsatilla patient.

Capsicum.—Although I have frequently referred to this remedy in other similar papers; it is too good a sample of our work to be omitted from this. How shall we account for the action of Capsicum in mastoid disease? Sinapisms are as old as the art of healing. Possibly one of Hippocrates's numerous students had the earache.

Mustard being scarce and red pepper plenty, a diversion was created in the race, so that future generations had an impression on the Capsicum line, and the proving evolved this tendency. But, seriously, one would never expect this symptom, "on the petrous bone behind the auricle a swelling, hard, red, and painful to the touch." Yet, this was the guiding-star, under clinical study, to a most valuable remedy. We are under obligation to Professor Allen for a study that leads to the question: "Is Capsicum of value in the treatment of ear diseases?" In comparing it with Hepar and Mercury, it belongs to the earlier stages of acute catarrhal or suppurative inflammation, and undoubtedly saves patients from the deep-seated suppuration in which Hepar and Mercury are needed, and operative interference a possible outcome. Still, it is very difficult to draw that line, and it is effective even after profuse suppuration is well established, and has made the knife unnecessary. Compared with Hepar, the area of sensitiveness is very much greater, and there is less of the variations due to exposure, time of day, etc. Compared with Mercury, the area of sensitiveness is as great, perhaps, but we do not notice the peculiar nightly aggravations of the latter remedy, nor the sticky, uncomfortable perspiration.

Tellurium.—Why should a metal like this select the tympanum as its point of offensive warfare? Why should it produce an offence that smells to heaven?—an odor of fish-brine so offensive that one finds a parallel in the proverbial profanity of the fish woman; possibly the drug was proved on one of them.

The proving, as made by Dr. Dunham, shows that there were most profound changes in the mucous membrane of the tympanum, as well as of the drum-head. One of the most remarkable cases that I have ever seen was the action of this remedy in the person of a young married woman, Mrs. M., 21 years of age. She had had suppuration of the ear from childhood, and now that the responsibility devolved upon herself since her married life, she was very anxious to be relieved of this annoying condition. The canal was large, tissues wasted, the drum-head undefined and oozing a thin, watery, most offensive discharge. Under Psorinum this was modified, and developed the characteristic odor of fish-brine. Under Tellurium, the appearance of the ear gradually changed, the discharge grew less, scales formed, were exfoliated, the outlines of the perforated drum-head came into view, the perforation healed, and,

to my great surprise, a fair degree of hearing was secured. The cure was permanent, at least, so far as I know up to date. I have seen the lady frequently since, and the result is very gratifying.

The comparison between this metal and the virus, Psorinum is unique. I admit that I had an intense prejudice against the latter remedy, but experience among the poor children at the Five-Points House of Industry, and later on at the Ophthalmic Hospital, overcame it entirely, and one need only study the wretched, puny, prematurely aged, with discharges of a cadaverous odor from the ears, stinking diarrhœa, stench of the very person, which is indescribable, but well recognized by those who have had experience with these cases who present themselves at our institutions, to be profoundly thankful for any remedy that will correct such conditions.

Chenopodium Anthelminticum.—Why should this vegetable select not only the auditory nerve but particular portions of it? Notice these symptoms taken from Allen's *Encyclopœdia:*

"Deafness to the sound of the voice, but exquisite sensitiveness to the sounds of passing vehicles. He remarked as each vehicle rolled by that it sounded like the roaring of immense cannons right into his ear; also annoying buzzing in the ears. . . . . During all this time his deafness, as described, was progressive, and became so pronounced as to make it impossible to talk to him. Still, there was the same kind of sensitiveness to other sounds. For example, when the tea-bell rang, though he was on the third story, three flights from where the sound came, he, without notice from members of his family, to their utter astonishment, got up and walked as deliberately as ever into the dining-room."

Here we have a picture of profound effect upon the auditory nerve, and, more than that, not an abolition of function, but a modification which shows deafness to voice, but sensitiveness to both high tones and low tones. Clinically, it has proved curative for the low tones of the organ, 16- and 32-foot pipe, and should be thought of when there is in the patient the perception of high tones, like those of small bells, whistles, etc., and also a shrinking from low tones, the intermediate tones being either good or absolutely lost.

I have given thus rapidly pictures of remedies acting upon the sensory nerves of the tympanum, not involving the mucous membrane to a degree of inflammation or suppuration; also, remedies affecting the tympanum in such a condition of acute inflammation,

and one remedy affecting the auditory nerve entirely independent of conditions of the middle ear.

These statements do not need any argument. They are too well known to those who are interested in this subject. If this be so, the question then arises, why is it that the profession does not use these remedies and similar remedies? Dr. Sterling has referred to one gentleman who does use them, and who has used them for years, to my personal knowledge, but when he offers them to his colleagues in a paper read in their hearing, they simply state that these are the remedies and the methods of Homœopathy. Let the gentleman take them and go with them to those who practice sectarian medicine.

The simple fact is that we are none of us free from prejudice, and we are not likely to be freed from our prejudices. Here and there peculiar circumstances of association or accidental conviction lead one to the investigation of physiological medicine, which is Homœopathy, and such persons modify their methods, if not their relations.

Perhaps it is not well to ask more in medical lines than we do in other lines of experience and conviction.

SOME RECENT ADVANCEMENTS IN OTOLOGY.

By Howard P. Bellows, M.D., Boston, Mass.

The aim of this paper is to pass in review the more notable advancements in otology, in the departments of anatomy, physiology and bacteriology during a period of about five years past. In the time allotted little can be done but to summarize, and this mode of treatment leaves little room for criticism and none for originality. It is hoped, however, that it will serve its purpose in stimulating discussion, and perhaps, in some instances, encouraging or guiding subsequent reading in some particular direction. To serve this end there will be found appended a very copious reference list of authors and articles.

Anatomy.—In this department of otology the growth of knowledge is of necessity slow, even where the work of several years is scanned. Considerable interest has lately attached to the relative situation and course of the *lateral sinus*, this being a point of vital importance in the surgery of the mastoid region and in brain surgery, which is just now so enthusiastically studied with relation to diseases of the ear. This sinus is now believed to follow a higher and more arching course after leaving the occipital protuberance and before beginning its downward dip behind the meatus, than was previously taught, and also to approach nearer to the meatus in its descent.[1] This changes somewhat the point and method chosen for surgical entrance. To drain the mastoid antrum, for instance, it is recently recommended to use a drill, which must not exceed $\frac{1}{4}$ inch in diameter, and enter straight in at a point immediately below the level of the upper border of the bony meatus and as close to its interior wall as possible. Another point which has apparently been established recently is in regard to the location of the *auditory centre*. This is claimed to be seated in "the posterior third of the first and second temporal convolutions."[2] The fibres of the auditory nerve from their origin "in the bi-polar ganglionic cells of the cochlea

and vestibular ganglia,"[3] proceed upward to these convolutions, and on their way undergo decussation, so that each cerebral hemisphere is supposed to receive impressions from both ears. The only nerve fibres which find their way into the cerebellum are said to be those which arise from the membranous semi-circular canals.[4] This view of the location of the auditory centre—for speech, at least—is corroborated by the finding of two autopsies, since published, in one of which[5] a pre-existing deafness on the left side, without apparent disease of the left ear, is thought to have been accounted for by the location of a cerebral tumor upon the right or opposite side of the brain, by which the first temporal convolution had been destroyed and the second somewhat injured; while the second autopsy,[2] in connection with the previous history of the case, seems to demonstrate, in addition, that total deafness only results when the hearing centre is destroyed on both sides of the brain.[6]

Physiology.—Perhaps the most interesting of the physiological questions which have received recent discussion, relates to the function of the *tympanic membrane*, which has acquired a new importance within the past year or two. One view advanced[7] is that its chief function is that of protection of the inner-tympanic structures, its presence especially guarding the membranes of the round and oval windows, and preventing their becoming dry and rigid. The transmission of sound by the drum-head is held to be a function of secondary importance, and the improvement of hearing which often follows an artificial perforation, it is believed can be only temporary because of the absence of the protection which the membrana tympani is designed to afford. Viewed from another, and purely experimental, standpoint, the function of the tympanic membrane as a transmitter of vibrations certainly seems to be a most important one. By means of some exceedingly ingenious and skillful experiments upon the cadaver, it has recently been demonstrated that if a lateral motion be given to the head of the malleus, a corresponding tilting motion is communicated to the foot-plate of the stapes, causing it to move from side to side in the direction of its long axis; and also, if an outward and inward motion is given to the tympanic membrane and malleus by means of the pneumatic speculum, a similar motion is perceived in the stapedial plate, which is seen to be drawn outwards as well as pushed inwards—a point of departure from all previous views. This the experimenter[8] speaks of as a "piston

movement," and he thinks it probable, from his experiments, that in some conditions partial or entire mobility may be restored to the stapes. This ready response of the stapedial plate to all movements of the tympanic membrane furnishes the latest explanation[9] of the perception of the direction of sound, since different vibrations are communicated in accordance with the different angle at which sound-waves impinge upon the surface of the membrane.

In regard to the mode of regeneration of the tympanic membrane, a new fact has been ascertained. There seems to be a difference whether the membrane is newly formed in its entirety, beginning at the tympanic ring, or whether it is merely the repair of a perforation. In the former case, it is demonstrated by a recent microscopical examination[10] that the lamina propria is reproduced by fibres, somewhat more dense than normal, which radiate inward from the tympanic ring.[11]

One of the most original of recent investigations in the physiology of the ear relates to the function of *otoliths*.[12] It being generally conceded that the perception of turning is acquired through the agency of the semi-circular canals, it is now shown that perceptions of progressive movement and of position in space may well be furnished by the otolithic apparatus. The vestibule is therefore found to be the organ of what is very aptly called the "static sense." In one series of experiments[13] the otolith was removed from ænophores and subsequent movements watched. These became irregular, and without equilibrium. The name "statoliths" is proposed for these substances instead of otoliths, because of their newly demonstrated function.

Finally, the *cochlea* has come in for recent investigation, with results which are of no little importance. The destruction of this organ, in whole or in part, in forty guinea-pigs, has demonstrated[14] that total deafness invariably follows complete destruction of the cochlea, and sometimes follows its partial destruction. It is surmised that perception of the higher notes of the musical scale may occur at the base of the cochlea, and the lower tones be perceived at the apex. This view is supported by the result of a recent human autopsy.[15] The patient had exhibited total deafness upon both sides, for all sounds except musical notes of low pitch. In the right cochlea was found, at the apex, a few nerves which were fairly well preserved, and Corti's organ in perfect condition.

Bacteriology.—This new field of investigation has already been well cultivated, and has been prolific of both facts and theories, the practical importance of which the future alone can determine. All portions of the auditory tract, including the Eustachian tube, the mastoid antrum, and even the interior of the labyrinth and the adjacent meninges of the brain, have been patiently and repeatedly searched for bacteria, and cultures obtained for study and verification. Also all secretions of the ear, and especially those which are purulent, have been subjected to the same process. Cerumen, for instance, has been searched for the presence of micro-organisms, and one set of experiments[16] covers a series of cultures made from fifty impacted cases. Large numbers of bacilli and cocci of different species were found, and their subsequent injection into animals produced disorders of the liver, lungs, and abdominal glands. But, in this particular instance, no practical deduction seems possible.

Among the curiosities of bacteriology may be mentioned a species of mould removed from the human meatus,[17] the spores of which were used for the inoculation of rabbits. These died in consequence, presenting characteristic symptoms of nephritis. The mould was therefore named *eurotium malignum*.

As might be expected, *furuncles* have received a special share of attention, and have been thoroughly studied with reference to the influence of bacteria. Cultures made from their contents exhibit constantly the staphylococcus albus, aureus or citreus,[18] either singly or combined. Experiments with these cultures[19] show that the presence alone of these cocci upon the surface of the skin is not sufficient to cause a furuncle, but that by rubbing they must be made to enter into the skin. How this entrance is really effected is a subject of interesting controversy, some holding an abrasion of the skin to be necessary, or an entrance by means of the gland ducts,[18] while it is claimed by others to be demonstrated by the microscope that the staphylococcus aureus penetrates the skin, not by way of surface-wounds or sweat-glands, but into the hair follicles,[20] working down between the hair and the root-sheath. In either case the same mode of treatment, whether abortive, curative, or preventive, is in vogue with all who accept this view of the origin and infectiousness of furuncles, and that consists in the destruction of the cocci by the use of topical applications. Although digressive, there may be men-

tioned, of these, kalium sulphuratum,[21] corrosive sublimate,[22] carbolic oil,[23] sublimate alcohol,[24] aluminium aceticum,[25] boric acid in alcohol,[26] carbolic acid glycerine,[27] menthol in petrolol,[28] [29] menthol in alcohol,[30] and menthol in sweet oil.[31] [32]

Coming to the middle ear, we find the rôles played by bacteria, according to recent views, to be exceedingly important, and the amount of minute and exact knowledge concerning them which is already acquired may well be a matter of surprise. Briefly stated, it is held that bacteria may find entrance to the middle ear[33] either by way of the Eustachian tube, the blood circulation, the lymphatics, the membrana tympani,[34] or the fissura petro-squamosa, and that their presence may induce either excessive secretion of mucus, plastic changes, or the formation of pus. It is held by some that in the tympanic cavity may always be found a small number of bacteria,[35] which remain harmless and quickly perish under ordinary conditions, but which may be aroused to activity and a virulent development under circumstances which favor. It has been experimentally demonstrated that such is the condition of the interior of the Eustachian tube,[36] but all authorities agree that the most probable source of infecting germs in the tympanum is through the tube from the naso-pharynx.

In *otitis media suppurativa*, which, of all forms of middle-ear inflammation, is the most important in this relation, and which has been the most carefully investigated, there have been found in the secretions[37] the streptococcus pyogenes,[38] the pneumococcus of Frænkel, the pneumobacillus of Friedlander, and the staphylococcus pyogenes.[39] The first named is found the most frequently and in the most severe cases, which may be complicated with mastoiditis, purulent meningitis,[40] cerebral abscess, phlebitis, thrombosis, or pyæmia. This, it will be remembered, is the same microbe that produces puerperal fever and erysipelas. In mastoid inflammation this strettococcus is almost exclusively found,[41] while its presence has been demonstrated upon the cerebral meninges[42] in a case of caries of the temporal bone, and in the labyrinth,[43] in fatal cases from diphtheria and measles. It is also this coccus which is present in the destructive otorrhœa of scarlatina. A less severe and more rapid form of inflammation, both as to development and resolution, is thought to be induced by the pneumococcus. In connection with these four microorganisms, the tubercle bacillus is found not infrequently,[45] [46] while

the most recent discovery has been the presence of the bacillus pyocyaneus.[47] The presence and true character of these various bacteria has been verified, time and again, by the inoculation of mice, guinea-pigs, and rabbits with cultures.

One suppurative case which underwent examination presented an especially interesting sequel. Re-examination eight weeks later, the discharge having continued, showed that the diplococcus, which was first present, had disappeared, but had been replaced by the staphylococcus pyogenes albus. This condition is called by the observer[35] a "secondary infection," and it is argued that, in the same way, a tertiary might occur, and this process be, perhaps, a cause of the long duration of many suppurative cases, and explain their marked tendency to become chronic.

In the middle-ear suppuration of influenza there has been discovered,[48] in addition to the streptococcus, the diplococcus pneumoniæ and the staphylococcus, a bacillus of peculiar form,[49] which could not be made to grow upon the usual nutrient material, and which is considered to be the influenza bacillus.[50]

As to the practical importance of these new discoveries, which have been so laboriously made, they teach us certainly the necessity of the most absolute cleanliness and antisepsis in our manipulation of aural cases, and especially in the care of instruments, which are used from one patient to another. Beyond this, as a means of prognosis or as a guide to treatment, very different estimates are held of the value of our present knowledge of these bacteria. It is thought by some that the fact of the presence of a given microbe, whether it be regarded as the primary cause of the diseased condition or not,[40] will determine the after progress of the disease in fixed channels;[37] while others believe that the finding of a certain coccus in the secretions can give no aid in the prognosis of aural disease, since the same microbe will at one time occasion only slight local effects and at other times serious general disturbances,[38] and since, indeed, inflammatory processes differing as much as the catarrhal and the suppurative are due to identically the same micro-organism.[51] It is more than probable that the present store of knowledge is only a step toward the ultimate benefit which may accrue to otology from the science of bacteriology, and it is hoped that this will eventually reward the zeal of the workers in this obscure field.

1. Birmingham—Brit. Med. Jour., September 20, 1890.
2. Mills—Brain, January, 1892.
3. His. Arch. f. Anat. u. Physiol., 1890, supplementary volume, p. 45.
4. Ferrier—Lancet, June, 1890.
5. Ferguson—Jour. of Anat. and Physiol., January, 1890.
6. Manourrier—Soc. d'Anthropologie de Paris, March, 1890.
7. Richey—Trans. Amer. Otol. Soc., 1888.
8. Larsen—Archives of Otology, April, 1892.
9. Bonnier—Comptes rendues de l'Acad. des Science, October 26, 1891.
10. Gomperz—Monatsschr. f. Ohrenheilk., etc., 1892, No. 4.
11. Rumler—Arch. f. Ohrenheilk., vol. xxx., p. 142.
12. Breuer—Arch. f. d. ges. Physiol., vol. xlviii., p. 195–306.
13. Verworn—Paper on Assuming Lectureship, Jena, 1891.
14. Corradi—Arch. f. Ohrenheilk., 1891, vol. xxxii., p. 1.
15. Habermann—Arch. f. Ohrenheilk., vol. xxxiii., p. 105.
16. Rohrer—Arch. f. Ohrenheilk., vol. xxix., p. 44.
17. Lindt—Arch. f. exprim. Path. u. Pharm., vol. xxv., 3 and 4.
18. Loewenberg—Trans. Ninth Internat. Med. Congress, 1877.
19. Sutton—Jour. of Anat. and Physiol., vol. xxi., p. 299.
20. Schimmelbusch—Archiv. für Ohrenheilk., xxvii., p. 252.
21. Schwartze.
22. Kirchner—Monats. f. Ohrenheilk., No. 1, 1887.
23. Politzer.
24. Weber—Liel.
25. Grosch—Berlin. klin. Wochenschr., 188, No. 18.
26. Loewenberg—Berlin. klin. Wochenschrift, 188, No. 28.
27. Bronner—Year-book of Treatment, 1890, p. 279.
28. Anton and Szenes—Prager med. Wochenschr., 1889, No. 33.
29. Szenes—Internat. Klinische Rundschau Vienna, June, 1890.
30. Hill—Year-Book of Treatment, 1890, p. 279.
31. Cholewa—Therap. Monatshafte, June, 1889.
32. Cholewa—Monatsschr. f. Ohrenheilk., etc., 1892, No. 3.
33. Moos—Sec. of Otol., Internat. Med. Congress, Berlin, 1890.
34. Moos—Deutsche med. Wochenschr., 1890, Nos. 11 and 12.
35. Zaufal—Prager med. Wochenschr., 1889, Nos. 6–12.
36. Maggiora and Gradenigo—Centralbl. f. Bacteriologie u. Parasitenkunde, vol. viii., p. 582, 1890.

37. Metter—Ann. des mal. de l'oreille et du larynx, 1888, No. 10.
38. Levy and Schrader—Arch. f. experiment. Path. u. Pharmakol., vol. xxvi., p. 223.
39. Chattellier—Soc. Anatomique, November 23, 1888.
40. Zaufal—Prager med. Wochenschr., 1888, Nos. 20–21.
41. Créboisier de Vomécourt—"Contribution à l'étude du rôle des micro-organismes dans les otites moyennes purulantes et leur complicacions mastöidiennes." 1892. Paris.
42. Netter.
43. Moos.
44. Marie Baskin—Centralbl. f. Bacteriol. u. Parasitenkunde, 1889, Nos. 13 and 14.
45. Field—Harveian Lectures (Brit. Med. Journal, December 3, 1892).
46. Cohnstädt—Monatsschr. f. Ohrenheilk., etc., 1892, No. 5.
47. Martha—Arch. de médic. experim., January, 1892.
48. Zaufal—Prager med. Wochenschr., 1892, No. 8.
49. Scheibe—Centralbl. f. Bacteriologie u. Parasitenkunde, vol. viii., p. 225, 1890.
50. Scheibe—Münch. med. Wochenschr., 1892, No. 14.
51. Maggiora and Gradenigo—Centralblatt für Bacteriologie and Parasitenkunde, etc., 1891, No. 19.

Discussion.

Francis B. Kellogg, M.D., of Tacoma: It is with considerable trepidation that I undertake the discussion of a paper which I have never seen. This unfortunate omission was unavoidable—sickness having prevented its completion in time for a preliminary transcontinental journey. If, therefore, my observations seem to relate to the subject in general rather than to the paper in question, this circumstance will serve at once as explanation and excuse.

They are, in the main, extracts from notes recently taken in Politzer's clinic in Vienna.

1. *Perforation of the Membrana Schrapuelli*—This form of perforation is peculiarly subject to invasions of masses of exfoliated epidermic cells or cholesteatomata. These cells are thrown off from the skin of the auditory canal, and by some occult process emigrate towards and through this opening into the attic of the tympanum. Loaded with septic germs, they become in this location a source of no small danger to the life of the patient, since, if neglected, they are liable to set up necrosis of the thin, bony roof of the attic, which

alone separates the latter from the brain. To dislodge and remove these masses from the tympanum is evidently, therefore, a matter of great importance. It is also one of no small difficulty. With the exception of the measure to be described, Hartman's canula offers the most effective means of accomplishing this end. It is open, however, to the objection that, except in large perforations, the canula itself offers an obstruction to the escape of the masses. The desirability of *vis a tergo* is evident, and presents a strong argument in favor of the following procedure: A large-sized catheter is inserted, its presence in the tube demonstrated by the air-bag and otoscope; after which the patient's head is tipped towards the affected side, and he is given a pus-basin to hold under the ear. He is directed to open his mouth widely, and to make (during the injection) short, sharp respirations, with the accent upon the expiratory sound, making as much noise as possible with the breath. It is impossible to do this without closing the naso-pharyngeal passage, thus preventing the escape of water into the throat. A large syringe, full of warm boiled water, is now forced through the catheter and tube into the middle ear. It is necessary to use considerable force, as much water unavoidably escapes about the point of the catheter, which fits only loosely into the mouth of the Eustachian tube. Enough water, however, enters the tympanum so that it is seen to drop from the external ear into the basin. The passage of even a few drops in this way is exceedingly effective, bringing away masses of epithelial débris, and softening that left behind so that it may be removed at a subsequent sitting. Nor is this procedure effective alone for the removal of cholesteatomata. According to Politzer, cases of chronic middle ear suppuration which have resisted all other treatment, have yielded to injections of boiled water alone when applied in this manner.

In adopting this treatment there is a single phenomenon for which it is necessary to be prepared, viz., vertigo. It is caused by the pressure of the water in the middle ear upon the oval window, and through this upon the labyrinthine fluid. With a clear appreciation of its cause, its relief is prompt and brilliant. The proper instrument for this purpose is an air-bag fitted with a rubber tube about a foot long, terminating in an ear-piece. The patient must be watched for symptoms of vertigo, as they will sometimes be so affected as to be unable to speak for a moment, and first show the affection by unsteadiness in the chair. Upon the first complaint or evidence of dizziness, exhaust the air-bag, insert the ear-piece air-tight into the canal, and exert suction upon the drum. The relief is magical.

Vertigo, resulting from manipulations in the ear is always caused by a disturbance of the pressure-equilibrium of the labyrinthine fluid. Usually, this disturbance is in the form of pressure from without, consequent upon syringing into the middle ear, either through the tube or through a perforated drum. It may also be incidental to

operations in the middle ear. In either case, the proper steps for its relief should never be forgotten.

Surgical Treatment of Deafness.—In this field, the American aurists have distanced those of other countries.

Extraction of the hammer is discouraged at Vienna, except for caries. Mobilization and circumcision of the stapes are the only surgical procedures having as their aim the restoration of hearing which are practiced there. In performing these, the opening in the drum-membrane is made either with the knife or galvano-cautery over the inco-stapedial articulation. A delicate paddle-shaped knife, cutting at the end of the blade, is pushed in below the foot-plate of the stapes into the oval window, and any existing adhesions are thus severed. It is a harmless but radical procedure, and should be undertaken in appropriate cases without hesitation.

Extraction of the stapes, however, as recently undertaken by Blake, of Boston, is a much more radical proceeding. The verdict as to its justification cannot yet be rendered. Two questions must first be answered,—first, is the improvement, if attained, permanent? second, are there dangers attending the operation which would overbalance the possible gain?

The first question time alone can answer. Presumption, however, is in its favor. It is urged, that the space in the oval window, formerly occupied by the foot-plate of the stapes, is replaced after the operation by membrane which must, naturally, respond to sound vibrations more freely than anchylosed bone. It is difficult to see how this membrane can be other than a permanent one, although, it may be subject to modifications, in course of time, which would impair its usefulness as a conductor of sound. With reference to possible risks, the operations thus far undertaken have been unattended with any unpleasant consequences. Vertigo, sometimes protracted, is to be expected, although frequently altogether absent. The operation is unattended with pain when performed under the influence of Cocaine injected *per tubam*. Solutions of Cocaine dropped into the external ear are comparatively impotent. If injected into the middle ear through the catheter, however, perfect local anæsthesia results.

The results of stapedectomy will be watched with great interest by the aurists of the world. Should its promises be fulfilled, it will be chronicled as one more triumph of American surgery.

OCULAR RELEX NEUROSES.

By James A. Campbell, M.D., St. Louis, Mo.

Medical literature of all ages is full of recorded cases of ocular reflex neuroses. In former times they were recorded more as peculiar and not understood phenomena; as curiosities, rather than in a scientific sense admitting of explanation. Each year as conducted experiment and investigation is carried on, and as the nervous physical and psychical functions and their intricate relationship are gradually unravelled, and become better understood, the curious gives way to the matter of fact, and the former phenomena to natural and fairly well understood laws.

The subject is very extensive and far-reaching. We have neither time nor space to attempt exhaustive treatment. Ours a duty to schedule and classify; to record action and reaction; to collect authentic cases, of every possible variety, and from this maze and aggregation endeavor to deduce, in the future, some general and well established laws.

Definition.—Nerve reflex is a direct transference of centripetal excitations to centrifugal paths, or *vice versa*, without the cooperation of the will.

All animal activity and functional force depend upon and is the result of physiological reflex action, whose general laws and pathways are understood.

The reflex is physiological as long as it is in harmony with normal functions and activities.

When the reflex excitations result either in over or under activity, it then becomes an abnormal reflex, or a neurosis.

Physiological reflex action, as well as reflex neurosis, may be manifested either as motor, sensor, or functional phenomena.

The contraction of the pupil to light is an example of physiological reflex; here impression is conveyed by the nerves of special sense (retina and optic nerve) to the brain centres, and then reflected back

through a motor nerve (third nerve) producing contraction of the pupil. Or the sight of a disgusting object may produce nausea; here the pathway of the nervous reflex is through the same nerve of special sense to the pneumogastric, and hence the consequent nausea, a neurosis. Or the fluttering, increased rapidity of the heart beat; or the blanching of the cheeks, in the presence of great danger, will again represent the functional features of a reflex neurosis.

The fact that these nerve impulses, originating in one system of nerves, may be transmitted to another system and reflected back again, from sensor to motor or functional, presupposes a close connection and intimate correlation between the cerebro-spinal and the sympathetic systems of nerves. Such intimate relationship and blending are anatomical and physiological facts.

The great sympathetic system of nerves is a series of closely connected ganglia, extending along each side of the spinal column, from the head to the cocyx, communicating with itself from side to side, as well as with both roots of the spinal cord as they emerge. It communicates likewise with all the other nerves of the body, uniting with the fourth and sixth nerves, in the cavernous sinus; and with the olfactory and auditory at their ultimate expansion, as well as being in close connection with all the other cranial nerves, through its cranial ganglia; forming thus the great blending and binding pathway and influence. While at the summit of the spinal cord is the medulla oblongata, a congregation of ganglionic centres, and series of sensory ganglia from which arise the seventh, eighth, ninth, tenth, eleventh and twelfth nerves; and also gives root to fibres of all the remaining six cranial nerves in its centre, the fourth ventricle. In addition to this, it is united by commisural bands in all parts of the brain proper, and contains most of the fibres, which are distributed to the other parts of the encephalon; and hence it transmits both the motor and sensory impulses, as they pass from and enter the cerebrum.

In the light of this intimate blending and interpenetration of the cerebro-spinal and sympathetic systems of nerves, their mutual influence, one upon the other, would seem to be, not phenomenal, but almost an anatomical and physiological necessity.

Since the normal processes and pathways of reflection are so numerous and complex, it is easily intelligible how numerous and complicated the disturbances of motility, sensation and function may be, and from how many different points abnormal influences may be

excited and reflected, in motor, sensor and functional, as well as in psychic, centres. The form and character of the neurosis may thus be extremely numerous, and hence the recognition of the primary cause may be not only difficult, but at times impossible to locate.

Starting out with the above statements clearly in mind, the discussion of ocular neuroses resolves itself into a simple statement of observed and recorded facts, without the necessity of delay for extended and elucidating argument.

Ocular reflex neuroses may be considered under two general headings:

I.—Reflex-neuroses from the eyes to and implicating other parts and organs.

II.—Reflex-neuroses from other parts and organs, affecting the eyes.

These reflex activities may be variously manifested, for the same cause may result either in sensory, motor, functional or organic disturbances, and there is no known fixed law to determine which it will be; in fact, these groups often present no sharp lines of demarcation, but frequently overlap each other at many points, so that, in certain cases, we meet with symptoms characteristic of two or more groups.

Under the first heading, or reflexes from the eyes producing disturbances in other parts and organs, the most important and the most frequently met with, are those resulting from optical anomalies, viz., myopia, hyperopia, astigmatism.

Various and distinctly different results may follow from the same apparent cause, such as pains in and about the eyes, headaches, neuralgia, photophobia, nictitation, diplopia, nausea, vertigo, dizziness, restlessness, insomnia and mental aberrations.

Local inflammations may follow same cause, as conjunctivitis, blepharitis, styes, corneal inflammation or ulceration, retinal hyperæmia or optic-nerve congestion, etc. These are all the direct results of irritation produced by eye-strain, transmitted through the optic nerve to and through the cerebro-spinal and sympathetic systems of nerves, finding outlet either as a perverted sensation, a motor impulse, or causing functional disturbance, and, may be, organic changes in various parts.

Under this heading we must also place heterophoria and its disturbing consequences, for it is not the deviation in direction of the eyes themselves directly which causes such unpleasant results, which

are almost identical with those caused by optical anomalies, but it is through the resulting lack of visual equilibrium, and the difficulty or impossibility of forming retinal images and impressions on the necessary "identical points," which is the prime cause of the long list of troubles which may follow in the wake of this lack of muscular equilibrium of the eyes.

If we ask why the same apparent condition may produce such widely different results, we should remember, as before remarked, that the laws of reflex action are not universal. The same irritation, functional or organic, may produce radically different reflexes in different subjects, or in the same subject at different times. While in other cases the same apparent optical or muscular error does not seem to be attended by the least irritating reflex results. There must be some nervous predisposition existing in the subject afflicted aside from the local points of irritation. This would seem to be proved by the fact that they in whom reflex troubles are most common are usually of a neurasthenic temperament.

To illustrate this variety of susceptibility coming under my personal observation, a few brief cases, which are familiar and numerous, may be given:

A scholarly minister, about 50, had, for years, suffered with neuralgic pains in and about the eyes, frequent nausea, nervous prostration, etc., the familiar picture. A + .25 Dc. ax. 90°, brought perfect relief and restored health.

In another case, a neurotic boy, age 15, had frequent epileptoid attacks, which a — .5 Dc. ax. horizontal removed, thus showing the small amount of error producing aggravated results in predisposed neuræsthenic subjects.

A typical case, showing an utter lack of susceptibility, may now be examined. A gentleman, age 30, applied to me for aid in defective vision. He had never seen as well as other people. Had never been subject to headaches, neuralgia, nor other signs of reflex irritation; only "could not see well."

Examination showed V = $\frac{15}{30}$. With + 6 Ds. ⌒ + 1.25 Dc. ax. 45° in the R. eye, and same combination, with ax. 135° in L. eye, gave him V = $\frac{15}{15}$. He continues to wear this glass with great physical comfort and personal satisfaction. Under ordinary circumstances we would have expected much nerve reflex irritation to be associated with such an optical condition.

Again, a young lady, 18 years old, wore a + 2 D. for six or eight years, with great relief to former sufferings. At the end of this time she again began to have reflex irritation symptoms to a very annoying degree. The addition of a .25 Dc., ax. 90° brought instant and permanent relief, thus showing that the neurasthenic predisposition may be different in the same individual at different times, influenced, no doubt, by other general conditions and nerve irritations, originating at parts other than the eyes.

Under peculiar reflex symptoms may here be mentioned the case of a lady with myopic astigmatism who felt a severe pain run down her right leg every time she tried to read more than a few minutes.

In the above consideration of the resulting sensory neuroses, above given, as pain, neuralgia, headaches, etc., we should remember, as Erb well states it, that pain is a common sensation that belongs, not to a peculiar kind, but only to a certain degree of sensation, and it thus has no specific quality. It is only a question of intensity; hence pain is only the aggravation of normal sensations, and this is the chief difference between a physiological reflex and an abnormal or reflex neuroses. The sensation of pain depends upon two factors, its intensity and individual susceptibility.

The various forms of reflex neuroses, which may result from optical anomalies, will illustrate the different reflex pathways through which perverted nerve action may be exhibited.

While the attention of the ophthalmologist is principally directed to the various forms of reflex neurosis originating in the eyes, he should carefully keep in mind that, in keeping with the laws of reflex nerve action, irritation of any character, having origin in any organ or at any part of the body remote or near the eyes, may be transmitted back to and affect the eyes through the same pathways which the first-mentioned efferent neurosis travelled. Indeed, many of the most obstinate and annoying cases of eye trouble we meet can only be remedied by the discovery and mastery of the remote causes which produce them. The eye is in a state of responsive sympathy with every organ and region of the body.

Tabes dorsalis or allied diseases are accompanied by contracted pupils and at times by paralysis of the eye muscles. Paresis of the occulo motorius and abducens occur in the early stages of locomotor ataxia.

In seventy cases of locomotor ataxia reported by Graniger Stew-

art (*cf. Med. W.*, 1882) there were 20 cases of squint; 3 of ptosis; 4 diplopia, without manifest squint; 7 of myosis; 4 difference in pupillary diameter; 8 with Argyll-Robertson pupil, etc.

On the other hand, irritation of the cilio-spinal region will often be associated with partial mydriasis and optic nerve congestion, while paresis or paralysis of the cervical sympathetic will produce myosis as well as partial ptosis. This is through the sympathetic system of nerves. According to Hensen and Volckers, the pupillary fibres of the sympathetic leave the cord at the upper dorsal and lower cervical vertebræ, going through the superior cervical ganglion and entering the carotid plexus. They then pass through the ciliary ganglion in the orbit. The whole of the fibres do not take this course, because it is found that when the ciliary ganglion is extirpated, irritation of the trunk of the sympathetic will still dilate the pupil. The ophthalmic branch of the fifth nerve, and probably other nerves connecting with the inner eye, also furnish channels of access for other sympathetic fibres. The partial ptosis is caused by paresis or paralysis of the sympathetic, which sends motor fibres to the musculi palpebrales. This form of partial ptosis is not uncommon in women, and is frequently associated with reflexes from the uterine or ovarian system.

Hystero-neuroses form a special and frequently met with group. It is noteworthy, however, that the severity of the uterine disease does not predicate the presence or absence, the severity or the mildness of the reflex. Authority tells us that structural diseases of the uterus and its appendages are not so apt to be followed by reflex phenomena, as functional troubles.

In his very interesting discussion of "Visual Disturbances and Uterine Disease," A. Mooren (*A. f. A.* vol. x.), declares, from his large experience, that there is no part of the eye which (either from a physiological or pathological point of view) is beyond the influence of the uterine system. He assigns the reflex theory as the direct cause.

The suppression of menstruation has frequently produced eye complications. McKay (*Jour. Med. Sciences*, 1882,) gives twelve cases of ocular affections from suppressed menstruation, numbering among them choked disc, diplopia, asthenopia, defective vision in some, etc.; while M. F. Comes (*Am. Med. Herald*, Oct., 1882,) gives four cases of menstrual amblyopia, varying from slight loss

of vision to almost total blindness, deep seated pains in eyes, with burning stinging, etc.—all of which were restored after menstruation had been re-established.

Sexual excesses, especially masturbation, are frequent causes of reflex ocular trouble. The latter is a prolific cause of much irritation, and it is generally very difficult to trace, especially in females. It is frequent cause of spasm of the accommodation, hyperæmia of the fundus and optic disc, obstinate neuralgic pains in and about the eyes, and in some cases paresis of the accommodation.

Connected with hysteria, that general neurosis of the whole nervous system, there are frequent and various forms of eye complications, embracing partial or complete amblyopia, hemiopia, scotoma, phosphenes, floating clouds, myosis, mydriasis, ptosis, photophobia, spasm or paresis of the accommodation, neuralgic pains, etc., all of which are purely reflex ocular neuroses, a part of the general neurosis.

Orificial irritations are frequent causes of reflex troubles. This includes hæmorrhoidal and other anal diseases, phymosis, stricture of the urethra, or cervix uteri—all of which are, without question, frequent causes. Recent current medical literature is filled with cases fully illustrating this.

Intestinal irritation, either from inflammation or from worms, has been followed by ocular reactions. Both of these conditions may produce similar eye reflexes, such as temporary strabismus, diplopia, myosis or mydriasis, ptosis or wide-open eyelids. Many remarkable cases have been reported from time to time. Lawrence (*Am. Ed.*, 1854, p. 607,) gives case of a child, seven years old, who had intolerable paroxysms of pain in left eye, recurring at uncertain intervals, without visible changes in the eye, which was entirely relieved by purgatives, bringing away a coral bead, which had been swallowed.

M. Wishart gives a case of complete amaurosis of the left eye, in a boy nine years old, of four months' duration, who made immediate recovery after free purgative.

Another case is given of a boy, eight years old, who could not see large print, who was rapidly restored after turpentine enemata brought away quantities of worms.

In a recent case of my own, a young man of twenty-six, who had a very persistent and annoying diplopia, causing vertigo and

disagreeable head symptoms, recovered promptly after passing several yards of tape-worm.

There are many cases, similar to those related, on record.

The great trifacial nerve is very intimately connected with all parts of the visual apparatus, both directly and indirectly through the sympathetic nerves and the ciliary ganglion. From this we might expect that all the necessary conditions to favor frequent and varied forms of ocular reflex neuroses were present—and such is the case.

Many authentic cases of defective vision following irritation of the fifth nerve, have been reported. McKenzie (*Am. Ed.*, 1855, p. 997,) gives a case of a man who had a small tumor on the crown of the head, which had been ten years coming. It was not painful or sensitive to touch. He had much headache, and quite a defective vision. It proved to be a cartilaginous cyst, filled with a yellowish fluid. Its removal restored his vision and remedied his headaches.

Within the past year a patient of mine had a tumor, size of a filbert, about one-half an inch above the supra-orbital foramen of the left eye. It had been gradually developing for some years, and the vision of that eye had been as gradually growing less and less. The removal of this growth perfectly restored the sight.

Many cases of partial or nearly total loss of vision, caused by diseased teeth, have been published. I discussed this topic in a contribution, "The Eye-tooth and the Eye," in the *Chicago Medical Investigator* (July, 1875), and gave then the accepted explanation for it, which is that it is a reflex-neurosis through the ciliary ganglion and the other sympathetic connections of the great trifacial nerve. Since then a number of interesting cases have come under my observation. One case is well worthy of comment. A lady had a large cavity in the left upper bicuspid tooth. The diseased contents were thoroughly excavated and removed, and the nerve was killed by a dentist. The tooth was filled with gold. A month or two afterward, the vision of the left eye began to fail, growing less and less as the weeks went by. The tooth was not sensitive, but the gum at one side of it seemed painful to pressure. The tooth was extracted, and the sight was rapidly restored. Examination of the tooth showed that in the filling of it the thin side wall had been perforated at one point, and a little plug of gold had been forced through it, extending about one-tenth of an inch outside, and pressed against

the wall of the socket; and this had set up the reflex-neurosis, through the well known pathways, to the seeing-nerve.

In the above brief examples of various forms of ocular reflex neuroses, no attempt has been made to explain why the reflexes should be so varied in their nature; why the phenomenon is at one time sensor, at another motor, then functional and again organic; for, as mentioned before, there does not seem to be any known law regulating the direction which the reflex may take. They may thus be manifested as

I.—Sensor. II.—Motor. III.—Functional. IV.—Organic.

Under sensor reflex neuroses may be grouped all forms of abnormal or perverted sensations—hyperæsthesia—anæsthesia.

Under motor reflexes will be included all forms of spasmodic action (tonic, clonic, spastic), paralysis or paresis.

Under functional reflex ocular neuroses, will be numbered all interference with the proper nutrition of the eye, or its vaso-motor supply, affecting as a result either the seeing nerve, retina, dioptric media, accommodation apparatus; or the proper support of any of the other eye tissues.

Closely related to this last heading is the reflex neuroses, which may result in organic changes; anæmia, hyperæmia, inflammation, tissue or anatomical changes, hyperplasia, neoplastic formations, degenerative processes, hypertrophy or atrophy. Eye literature is full of examples of the above statements.

McKenzie relates a case of a man, aged 45, with an old discharging ulcer on his leg, which was suppressed by his getting wet. This was followed by blindness, in fourteen days afterward. The ulcer was restored and vision then returned. The same authority tells us that Beer claimed to have cured twenty such amaurotic patients, by restoring suppressed ulcerations. Such conditions can only be explained by reflex sympathy from the sentient surfaces to the cerebro-spinal centre, transferred to the sympathetic system, and through this to the optic nerves and retinal expansion, or their brain centres.

A. Moore has discussed this question in his paper, "Influence of the Skin and its Diseases upon the Eye."

An important additional heading should be likewise mentioned, which, while distinct from the others, is very markedly influenced by any one or all of the above subdivisions given. It may be introduced under the term psychic, or the influence of ocular neuroses

upon the brain centres proper, which may result in illusions, aberrations, chorea, epileptoid seizures, vertigo and even insanity. Both optical anomalies and heterophoria have been followed by such results.

Experiment has demonstrated, that section or paralysis of the cervical sympathetic will be followed by hypotony, and that irritation of the same nerve will produce the reverse effect, hypertony; thus proving conclusively, that tension of the eye is largely influenced, if not entirely regulated by the sympathetic nerve. The well-known fact that the irritation of the fifth nerve may cause increased T. and its paralysis a reduced T., does not disprove it, for this latter effect may be explained by the intimate relationship and reflex blending of these nerves, brought about through the ciliary ganglion. Hence, since it is thus proved that T. of the eyes may be increased by irritation of the sympathetic nerves, and decreased by its partial or total paralysis, and since the nutrition of the eye itself is largely influenced by the same sympathetic; and finally, since the sympathetic may be irritated by reflex action, from other nerves, it would seem reasonable to assume that glaucoma is merely a reflex neurosis, arising from a continued irritation of the sympathetic nerves, connected with the eye, which irritation, as we have seen, may have origin in any part of the body near or remote from the eyes. Indeed the frequency with which we find glaucoma associated with other bodily diseases, gives emphasis to this proposition. I have been struck with the frequency of the coexistence of rheumatism and similar disorders, and glaucoma. It has followed sudden shock, fright, fear and even joy. The suddenness of its onset, at times again points strongly to its reflex nervous origin.

Following this same line of thought in the light of the phenomena presented, it is not difficult for me to believe, that sympathetic ophthalmia is likewise a reflex neuroses, from a diseased eye, to similar and corresponding parts in the other eye. This, to me, seems more reasonable, and in accordance with facts and conditions, than the strained effort to explain it by any microbian meanderings or contiguous inflammatory transmission, or through the lymphatics.

In the discussion of this subject I have realized thoroughly its immensity, and the utter impossibility of describing and including all the numerous phenomena connected with it, in the limits of a paper on such an occasion as this. My effort has been, to bring out,

for discussion, in a brief and simple way, some of the most salient points connected with the topic, and to offer a certain few debatable propositions for discussion.

A brief notice of a new book, *The Relation of the Visual Organ and its Diseases to the Other Diseases of the Body and its Organs*, by Dr. Max Knies, has recently attracted my attention. I very much regret my inability to secure a copy of it, for it is, no doubt, a most valuable contribution to the subject I have endeavored to introduce.

REPORT

OF THE

SECTION IN GYNÆCOLOGY.

CHICAGO, ILL., May 31, 1893.

THE Section was called to order at 3 P.M. on Wednesday, May 31, 1893, in the hall of Washington, Art Institute Building. O. S. Runnels, M.D., of Indianapolis, Ind., Chairman of the Section, presided.

The first business in order was the delivery of the Chairman's Inaugural Address, entitled "The Sine-Qua-Non."

Following the address, Dr. L. A. Phillips, of Boston, Mass., read a paper on "Homœopathy in Gynæcology." It was discussed by Drs. A. C. Cowperthwaite, of Chicago, Ill.; W. P. MacCracken, of Chicago, Ill.; Julia Ross Lowe, James C. Wood, of Ann Arbor, Mich.; R. Ludlam, of Chicago, Ill.; Alfred C. Hawkes, of Liverpool, England; Chester G. Higbee, of St. Paul, Minn.; Flora A. Brewster, of Baltimore, Md.; J. M. Lee, of Rochester, N. Y.; and by the author of the essay.

A paper on "Some of the Clinical Aspects of Septic Invasion," by Edward T. Blake, of London, England, was presented by title, and was discussed by Dr. M. O. Terry, of Utica, N. Y.

Dr. Charles E. Walton, of Cincinnati, O., read an essay on "The Relation of Surgery to Gynæcology." It was followed by a discussion, participated in by Drs. H. E. Beebe, of Sidney, O.; W. H. Hanchett, of Omaha, Neb.; M. Ayres, of Rushville, Ill.; Phœbe J. B. Waite, of New York, N. Y.; Martha J. Ripley, of Minneapolis, Minn.; Alonzo Boothby, of Boston, Mass.; and H. W. Roby, of Topeka, Kan.

The next paper was read by Dr. W. E. Green, of Little Rock, Ark. It was on "Plastic Surgery of the Vagina," and was discussed by Dr. M. T. Runnels, of Kansas City, Mo., whose remarks,

in the absence of Dr. Runnels, were read by Dr. M. O. Terry. The discussion was also participated in by Drs. L. C. Grosvenor, of Chicago, Ill.; T. L. Macdonald, of Washington, D. C.; Martha G. Ripley, of Minneapolis, Minn.; J. W. Streeter, of Chicago, Ill.; J. C. Wood, of Ann Arbor, Mich.; and by Dr. Green, the writer of the paper.

The sectional meeting then adjourned until Thursday evening.

CHICAGO, June 1, 1893.

The Section in Gynæcology re-convened at 7.30 P.M., Chairman Runnels presiding.

Dr. H. F. Biggar, of Cleveland, O., read a paper on "Cæsarian Section." The paper was discussed by Drs. J. W. Streeter, of Chicago, Ill.; O. S. Runnels, Chairman; E. H. Pratt, of Chicago, Ill.; and by Dr. H. F. Biggar, author of the paper. As the discussion was about to close, Dr. R. Ludlam, of Chicago, Ill., entered the room and proceeded to discuss the subject. He was followed briefly by Dr. Biggar.

Next came an essay by Dr. J. W. Streeter, of Chicago, Ill., on "Uterine Fibroids." It was debated by Drs. Henry W. Roby, of Topeka, Kan.; George Royal, of Des Moines, Ia.; E. B. Finney, of Lincoln, Neb.; H. F. Biggar, of Cleveland, O.; and H. Tyler Wilcox.

Dr. J. M. Lee, of Rochester, N. Y., next presented a paper on "Vaginal Hysterectomy." Discussion of the paper was by Dr. R. Ludlam, of Chicago, Ill.

The final essay presented in the Section was entitled "Removal of the Entire Uterus, Together with the Appendages, for Uterine Fibroids," by Homer I. Ostrom, M.D., of New York, N. Y. In the absence of the author it was read by Dr. Thomas Franklin Smith, of New York, N. Y. The discussion was participated in by Dr. Alonzo Boothby, of Boston, Mass.

After a few congratulatory remarks by the Chairman, the Section was declared adjourned.

INAUGURAL ADDRESS.

By O. S. Runnels, M.D., Indianapolis, Ind., Chairman.

The Sine-Qua-Non.

The danger that confronts every specialist is a too intense and contracted specialism. Having a circumscribed field of operation—a portion only of the physical territory—under jurisdiction, he is apt to narrow his field of vision accordingly, to recognize boundaries that do not exist, and, thus, to get onesidedness or inadequacy of view.

In the development of a particular branch of knowledge, concentration of the mind upon the single object follows of necessity, but care must be taken lest the intensity of the effort to reach the heart of the subject shall shut out what is of equal importance. There must be equivalent energy displayed in the study of relationships—in discerning the effect new facts will have upon facts already accumulated and *vice versa*. The centripetal must ever be opposed by the centrifugal if the golden mean is to be established and progress maintained. Every specialist, therefore, should be a generalist—an authority not only upon the pin-point of his habitual observation, but also upon all the avenues leading to it.

In the study of that highest expression of God's handiwork, the human body, with all the forces that actuate it, it behooves the student to recognize the unity of the organism with which he has to deal, and to know at the outset that a touch anywhere upon or within it is a touch not only of a part but of the whole; that he has not merely a section to take into account but an entirety, and that no electric battery can ever show greater sensitiveness than does the life of man from remotest nerve fibril to central ganglion.

Unlike the machinery of a great mill, the parts of which may act co-ordinately, or, without special detriment, may not act at all, while the great central movement goes on, the human machine is a combination which must act harmoniously in all its parts, inasmuch as there is genuine community of interest throughout, and no part can be discordant without affecting the tranquillity of the whole.

The thing that characterizes the animal organism, making it dissimilar from every other aggregation of applied forces, is the all-important factor we call life. It is this pervasive force everywhere resident within the body that calls to itself the material for building and repair, that keeps the machinery in motion, that stands guard and fights battles when dangers menace, and that establishes, through its manifold agencies, that vicegerent of Highest Power recognized as soul, mind, spirit or vital energy, together with all that these imply.

Life is that force which precedes organization, which sways the forces of nature to its will, and which reigns supreme in the domain of vital technics. Here is an instinct that molds and controls all that pertains to existence, and which must be taken into account in every synthesis and analysis made by the physician. There can be here no such thing as segregation, no such thing as independent exercise. It matters little how many thousand grains of pabulum a grain of pepsin can digest outside of the body, or what the chemical affinities and reactions may be in the laboratory. The great question is what will be the result when these are called upon to act in the presence of life?

The bacteriologist, with his culture-tube, for example, has made in these last decades vast acquirement, thus putting the world under the most lasting obligations; but no one knows so well as he that his problem is hedged by limitations, that results gained uniformly in the laboratory cannot be duplicated at will in the human body, and that germs, to grow, require a favorable habitat. There must be a proper medium and right conditions, or a nidus cannot be made.

It is common observation that all persons exposed to deadly bacteria do not succumb to their influences; that in all epidemics—such as la grippe, yellow fever or cholera—the number that contracts the disease is, after all, less than a moiety of those exposed, and that of those even in whom the germ finds lodgment 75 per cent. or over recover. Many persons are found who cannot be inoculated, or who take the sepsis to a very slight extent, the malign influence rolling from them like water from a duck's back, leaving them unimpaired.

Why is it that garbage-men, sewer-men, workmen in fertilizing establishments, in dissecting-rooms and rag factories, and all those in touch with contagion and pollution of every sort, who are breath-

ing or swallowing myriads of death-producing germs every instant of their lives, do not sicken and die to the last man of them? Wherefore is it that millions of mothers who give birth to their offspring in stifling and stinking apartments, and upon beds of polluted rags worse than a dung-heap, do not become extinct through the ravages of septicæmia?

On every hand can be found instances of harmless disregard of all those precautions accounted indispensable in these days of Joseph Lister. Lawson Tait and Knowsley Thornton, holding opposite views on the uses of germicides, go on reducing the death-rate in laparotomy in about equal proportions, leaving to their respective adherents the task of reconciling their theories in the light of such diverse practices. Whether the brilliant advancement made in surgical, gynæcological and obstetric art in the last twenty years is due to antisepsis, severe cleanliness or improved technique, I do not care now to argue. They all hold vital place in the record of progress, and will have due award.

The thing that I want to centre your minds upon to-day is the fact that there is a greater Richmond in the field than the germicide, or than the thing even that the germicide kills. I want to emphasize the intrinsic meaning of the thing we call life. I would like to make the thought material, that when life is here in all its potency we have a complete wall of defense against all intruders, a fort garrisoned against all foes, a battery invulnerable against all paralysis.

It is coming to be understood that all disease is a sequence of paralysis, a record of incapacity of function—telling of enervated, defenseless, non-resistant organs; and that it is only "where the carcass is" that "the eagles are gathered together," only in decaying or non-vital tissues that bacteria can work their devastations. They are here as the vultures and maggots are here on the dead animal—*post hoc*, but not *propter hoc*. They do not create the death, but find it; other processes having been precedent to pave the way. They came as scavengers to clean up an unsanitary city, and, under all conditions favorable to them, may be expected to fulfill their mission.

Susceptibility to their invasion is only one of the evidences of a lame and crippled vitality. It is one of the proofs that the soldier is not fit for the battle. Some time in the near or remote past his line of defence has been broken down; paralysis of function, in whole

or in part, has taken place; some lethargy has stolen over the repellent forces of life, making surrender a legitimate sequence.

In an organism endowed with its full complement of vigor—a *vis-a-tergo*, strong and valiant to the remotest capillary—all the erectile tissues will be on the alert and fully fortified; a volume of oxygenated blood will be pulsing at full current through all its channels, clearing every deck for action, holding every tar to his work, and keeping the flag at the mast-top.

In other words, life depends upon what is called vascular tone; upon a normal circulation of the blood; upon the accomplishment of a perfect nutrition. And, conversely, disease depends upon vascular atony, upon enfeebled circulation, upon mal-nutrition. This is the very bed-rock of all progress in pathology and therapeutics. Out of this nutshell must grow all that is enduring and serviceable in the work of physical salvation. It becomes obligatory upon all workers to gain mastery of these axioms before proceeding farther.

Going down to the capillaries, both near and remote, where all the life-battles are fought, we must discover the ways of impressing them; study their modes of expression, and all that will conduce to their integrity and most vigorous activity. We must note at the outset their exceeding sensitivity; their dependence upon live blood-disc and cell-growth; their ready embarrassment and perversion of function; and that no coarse disease expression can ever announce itself upon the broad plain of the body until long after the battle has been waged and lost in these infinitesimal structures.

Whether in the elephant, the tiniest human embryo, or the amœba, life is wholly dependent upon the maturity and prolificacy of the ephemeral cell; upon vigorous cell-growth and segmentation, and this, in turn, upon nutrition. It is all a question of lifeless pabulum and its conversion by the cells into living germinal matter—for it is only in the yolk that cell-cleavage takes place. The ceaseless arrival in the capillaries of the blood-disc, freighted with all that goes to the nourishment of the cell, and its quick departure on the venous current, bearing with it the dead, the broken and the useless—this is life, and all the rest follows. Insure a good circulation of the blood, and you make certain the vigor and full maturity of the body in all its parts.

But how vascular tone is to be engendered, how vaso motor energy

is to be maintained, is the universal problem. This is the trysting-ground of all curative effort, and to this accomplishment all theory and practice must apply—whether it be physical culture, dietetics, hot or cold baths, massage, electricity, climate, surgery or medicines, the common end sought is better energy of blood-circulation—the innervation or invigoration of the nerves that creep along all the arteries, and insure healthy vegetation. The question is how can the reserves be called into action; how can the worn and tired columns at the front be strengthened and rested; how can the magazine and commissary be resupplied?

Before going further with this deliberation I desire to remind you that the nerves that supply the muscular coat of the arteries with power to contract and relax are efferent, motor or outward-bound; that they receive their stimulus from within instead of from without as is the case with the afferent, sensory or inward-bound nerves, and that the messages sent to and from them are for the most part silent ones. That they are not under the domination of the will as are the motor nerves generally, but issuing mainly from the ganglia of the great sympathetic, are almost wholly under its control. That they report to and get their orders from the ganglia of the sympathetic rather than the cerebro-spinal; that while they do not have sensory power themselves, or have it to a very feeble extent, they have the ability in a large degree to call upon any sensitive nerve in the body to voice their complaints. While apparently the sympathetic is subservient to the cerebro-spinal, the latter is in reality the servant of the former. There is mutual dependence and inter-dependence, but when it comes to the question of rank the highest authority is found with the sympathetic. It is the sympathetic that rules the vegetative sphere; that presides over all the innermost details of body-growth and maintenance, and that has the sole command during all that stage of life precedent to conscious existence, and all that latter portion also, passed in sleep or unconsciousness from whatever cause. The sympathetic nervous system is the connecting link between the animal and the vegetable worlds—making the line of demarcation between sensitive animal and sensitive plant almost if not quite, undiscoverable. It takes possession of the individual at his conception—when the spermatozoon makes union with the ovum—and rules with sleepless vigil from that instant till the time when the last spark of vital response is obtainable at the general death. It is the first and

last nerve of existence, and serves to make supply and waste—revictualing and consumption—proportionate.

That the ganglia of the sympathetic are the ultimate reservoirs of life—the last to respond to stimuli—is conclusively shown when appealed to in cases of apparent death and in occasional instances also after complete expiration by the expulsion of the child from the womb, and of urine and fæces from bladder and rectum. The great effectiveness of rectal dilatation in the resuscitation of the still-born, and of others asphyxiated or drowned, or under the deadly influence of anæsthetic or narcotic agent, has been conclusively proven in numberless instances of last resort.

The sympathetic was here in what may be termed the paleozoic times of human history, while the cerebro-spinal, is its product and of comparatively late development. While the cerebro-spinal is the outgrowth of the sympathetic, possessing many of its attributes and modes of speech, there are yet heights and depths of vital expression unknown to it.

Integrity of life is maintained through the play and exercise of involuntary forces, which, if normal, go noiselessly and peacefully forward like the deep and still current of a mighty river.

I have dwelt at such length upon these distinctions because I believe that all true progress in our art is dependent upon the deeper study and better understanding of the ways and means of the Great Sympathetic; because I am impressed by the thought growing ever clearer to me, that the ability of the individual to cope with the forces inimical that confront him here is dependent wholly upon the unembarrassed sympathetic nervous system. When I interrogate life-processes closely, either in the animal or vegetable world, I find that wherever nature has a fair chance she makes a perfect growth. If she has not been teased, nagged nor irritated through indefinite periods; if her finished product has not been wasted; if her ganglionic or battery-power has not been exhausted, but is at hand, like a Leyden-jar charged with electricity ready for powerful discharge, you can depend upon it there will be no evidence of incompetency anywhere manifest. Neurasthenia, fatigue and all candidacy for disease invasion is evidence that the battery is not operative at its best, and that some one or all of the thousands of storage centres in the body have been exhausted in whole or in part of their power.

The measure of life-ability and the number of milliamperes of

vitality yet possessed are correlative. The reason why Mr. Tait is able to make one hundred and thirty-nine laparotomies without antiseptics and without a death is found in the fact that he husbands the physical reserve to the utmost. His work is speedy, and there is as little mopping and friction of nerve-terminals as possible. When I saw him remove multilocular cysts and diseased appendages in from five to twelve minutes without ever putting a sponge or other mop within the cavity, I understood that it was not a little free blood in the abdomen that he feared, but the unnecessary discharge of vital-force through a long and slovenly operation. It was all over so quickly that when the patient recovered from her very short anæsthesia she hardly realized that she had been hurt. Improved technique consists in nothing so much as the acquisition of masterful ability to do the work required at the least possible cost to the vital remnant.

Coming now to the application and conclusion of this matter, I say that it is the business of every specialist and every generalist as well, to go behind the returns made by the patient and get back to the initial departure. If he is to do any lasting, worthy service, he must not only make the best of the bad condition immediately before him, but taking the backward trail he must be able to ascertain why things have reached the present pass. If he would know how to set the switch that shall save the train he must be able to discern the evidences of mal-nutrition at their very inception. He must be trained not only to report when the storehouse is more or less empty, but how to preserve or restore its contents.

The golden days of our art will not have arrived until its devotees shall have reached that higher plane of service embodied in prevention rather than in cure; in enabling people to reach the highest excellence of physiology rather than in rescuing them, with more or less of failure, from the death-grip of pathology.

It is vastly more to the credit of those in charge of great systems of travel to be found inspecting road-bed, bridges and rolling-stock —detecting weak places in order to head off disasters—than to be found at the head of a wrecking-crew, however well equipped, waiting for expected catastrophe, or endeavoring to make the best of a smash-up.

HOMŒOPATHY IN GYNÆCOLOGY.

By L. A. Phillips, M.D., Boston, Mass.

The question, "What has Homœopathy done for Gynæcology?" having been raised and proposed as a theme for one of the essays at this meeting, our honored chairman assigned it to me, and it was accepted with the expectation that an answer to such a question, even if not altogether satisfactory, would be tolerably easy; but the task has proved a much more difficult one than I anticipated. The difficulty lies not in any doubt of the good work done by Homœopathy in this field, but in the absence of positive evidence regarding the administration of any one remedy in any given class of cases, the uncertainty regarding the conditions for which remedies are prescribed in many instances—especially when based wholly upon subjective symptoms—and in the want of knowledge regarding the pathogenesy of the remedies reported as curative. If possessed of that unquestioning and implicit faith which knows or recognizes no conditions or exceptions to the power of Homœopathic medication to overcome and cure each and every human ill, regardless of cause or character, it would be very easy to claim that Homœopathy had at least furnished the means, if we but make ourselves competent to use it, by which all that gynæcology or any other class of diseases presents for relief may be successfully met; and with the exalted power of imagination which can see the most marvellous effects follow the administration of a drop of water or a grain of sugar, it would not be difficult to demonstrate, to our own satisfaction, at least, that by such means more remarkable cures have been and are being effected than by any or all other methods. But I cannot treat the subject from any such standpoint. A general, sweeping claim without evidence amounts to nothing. We want to know if definite and unquestionable results can be shown as the direct effect of Homœopathic treatment in women's diseases, whether independent of or associated with other measures.

While we all, doubtless, believe and feel sure, from experience and observation, that such results are produced, to define and demonstrate this so that it cannot be gainsaid is a very different matter, and while I do not expect to succeed in doing this to any great extent, I shall hope to prepare the way, and perhaps indicate the lines along which, by the testimony of those who may bear witness in the discussion to follow, the demonstration may be made and the fact established. Let us, then, seek to make all our claims rational and based upon known facts, not upon theories or assumptions. Thus only can we command or reasonably expect a fair and respectful hearing.

In the consideration of such a question as this the term gynæcology must be understood to mean broadly the diseases and derangements of the female generative organs, not only in the degrees which bring them under the care of the gynæcologist, but in all degrees as presented to the general practitioner or family physician as well, and we must all realize that it is less from the gynæcological specialists than from the family physicians that the evidence of the curative power of Homœopathic remedies must be expected. While this by some may be deemed a concession, or even an admission of the preferred charges that gynæcologists are not good Homœopaths, I shall deny this, and maintain that it is but a natural and necessary consequence, inasmuch as Homœopathy, *per se*, has to do with nothing but the therapeutics in any case, and it is generally recognized that therapeutic means are most marked and definite in their effects upon functional derangements and the early manifestations of disease in all departments of practice; and because the work to be done by specialists is largely that which other physicians, by therapeutic methods, have not succeeded in doing, and which generally demand some form of surgical or mechanical treatment.

From the recorded evidence of the skillful prescribers of Homœopathic remedies, we may reasonably claim that by this means a large proportion of the functional derangements of women are speedily and perfectly corrected without the need of any other form of treatment, and that a very considerable proportion of the diseases—that is, the pathological changes to which the uterine organs are subject —are prevented or cured at the very outset by the same means. Now, while this may not be capable of absolute or positive proof, we certainly have strong circumstantial evidence for it in the fact

that women who from childhood have been under the care of the Homœopathic physicians have far less of this class of diseases than those who have not been so fortunate, and also in the fact that the general practitioners of Homœopathy have few cases which they feel compelled to send to the gynæcologists as compared with those of the Old School, who have not the means of relief which our Homœopathic medicines afford.

Now, while we know that in all spheres and relations of life little credit is given those who guard and protect from impending dangers, as compared with that accorded those who rescue the victim from the very teeth of the destroyer; yet it is as true in this as in any other instance that "an ounce of prevention is better than a pound of cure," and who will not agree that to save a woman from the mental as well as physical suffering which attends the development and course of a uterine or mammary cancer, for instance, is to bestow a far greater blessing than it is possible for even the most skilful surgeon to bring when his services are necessitated, and because the life which, if saved by the surgeon's skill, is a shattered and blighted one at best, by the other means is enabled to develop *all* its powers, to ripen and produce its fruits free from the torture, the impending danger of which was no less real because only in its incipiency. And so, while the surgeon who succeeds in saving the fragments of such lives, even for a few years, wins honor, fame, and wealth, they who have done so much more by protecting and saving lives in their entirety are unrecognized and without reward; often without even the gratitude of the patients, who do not realize what has been done for them.

In this very way Homœopathy is doing for its friends and adherents vastly more than they realize or even suspect, and in such a gentle and unpretentious manner that little credit is given and scarcely any evidence recorded. Innumerable cases of this class, that is, of prevention or cure in the embryonic stages of disease, many times unknown to either the patient or the physician, are to be credited to a system of healing which is competent to meet the enemy at any point and in any form; to fortify against and ward it off without being compelled to wait its full development or to learn its exact name and nature before active measures for relief can be adopted. This claim will not be allowed, I am well aware, except by those who know and feel the influence and power of this law of

cure; but though we cannot, of course, prove prevention in any individual case, we could, were it practicable, by a comparison of our lists of patrons with a like number differently treated, demonstrate its validity. We cannot wonder nor much blame our Old-School brethren for doubting our claim when we remember that they have so generally lost all, or nearly all, faith in the power or virtue of drugs except as opiates to destroy the consciousness of pain, tonics to stimulate nature's efforts, or alteratives to disturb existing functional derangements, hoping that out of the disturbance nature may evolve an improved condition. But to any physician who has had any considerable experience in the Homœopathic application of remedies, numberless instances of relief and cure will be recalled to mind by the mere mention of Aconite, Arsenicum, Bryonia, Belladonna, Cimicifuga, Colocynthis, Gelsemium, Helonias, Mercurius, Thuja, Viburnum, and scores of other remedies; and if you would, one and all, furnish definite and accurate reports of your experiences, we could compel a recognition of the claim that Homœopathic remedies in the hands of skilled prescribers can and do cure most cases of functional derangement and prevent or cure in their incipiency a considerable portion of the diseases of women.

Here, then, before reaching the sphere of the gynæcologist, we find the proofs of Homœopathy in gynæcology of which we may well feel proud. But it does not end here, the opinion of some of our critical brethren to the contrary notwithstanding. I think I am safe in claiming that in the practice of Homœopathic gynæcologists fully one-half the cases which, under Old-School treatment, would remain uncured or be subjected to surgical operation are cured by Homœopathic treatment. Not every case is thus curable, and many demand surgical treatment. But we do, by combining Homœopathic medication with the needed mechanical measures, cure many pathological conditions; such, for example, as metritis and endometritis, pelvic peritonitis, ovaritis, uterine dislocations, fibroid tumors, salpingitis, etc. And we have some well-authenticated cases in which ovarian cysts have disappeared during the continued application of the indicated remedy; and not only this, but very many who have endured for a longer or shorter season the attempts of the Old-School specialists to cure, come to us and find the relief they had previously failed to receive; and certainly not because we are better mechanics, but because we have the Homœopathic remedies to aid us; and this is

equally true in cases which require surgical treatment. While the knife removes the cause of the difficulty, the remedies remove many serious effects, and afford relief to the suffering nerves unknown to any other method of treatment. And not only this, but the healing of wounds and convalescence are more rapid and perfect when thus treated than when opiates and poisonous drugs and dressings are used.

Inasmuch as it is becoming ever more evident that the sufferings of women which gynæcologists are called upon to relieve are very largely neurasthenic, or of nervous origin, and that even the removal of pathological conditions, especially by surgical means, does not always give complete and ofttimes little or no relief, we find new and increasing reasons for endeavoring to find Homœopathic remedies to meet these conditions, and I believe it is because our remedies, rightly applied, act upon and through the nervous system chiefly that their effects, even when intended to act upon a pathological condition, or a certain organ, have been more potent than the cruder methods which shock or numb rather than regulate the nervous forces.

I feel that it would be hardly just on my part not to state that the specialists (or perhaps I need speak only for myself) do not adhere strictly or exclusively to highly attenuated medicaments nor to the more common method of administration per oris. Experience has taught me that in treating the diseases and derangements of the pelvic organs I can get much more decided and speedy effects by applying glyceroles, triturations, cerates, or in some cases crude substances to the mucous or denuded surfaces, the medication being selected to correspond with the symptoms just as in any other class of cases, or for the ordinary manner of administration. And we can maintain with the highest of authority, Hahnemann himself, that such medication is no less Homœopathic than giving the same remedies for similar conditions by the mouth.

While in our surgical cases, by the use of Calendula, Hypericum, Hamamelis, Arnica, etc., rapid healing is promoted, suffering is greatly lessened, and with the further aid of other indicated remedies before and after operations, opiates are rendered unnecessary in nearly all cases, and convalescence thus promoted and hastened; and while in our office practice we are curing active congestion of the uterine organs, attended by the characteristic symptoms of Belladonna by a local application of glyceroles of that drug, the passive

or venous congestions with Hamamelis, syphilitic ulcers with Mercurius corr., indurations or hyperplasia with Iodine, etc., and doing it much more surely and speedily than it can be done otherwise, who shall deny that Homœopathic gynæcologists are as truly and effectively demonstrating the power of Homœopathy as they who prescribe these same remedies in attenuated form and by the mouth for more like conditions?

Feeling as we do that we have a right to claim much for Homœopathy in gynæcology, it must still be admitted that much more might and should be accomplished in this field; and I am granted the privilege of indicating some of the means by which more definite and convincing results may in future be obtained.

First of all, we must have more thorough provings of our remedies by women, and with competent observation of their effects upon the pelvic organs. As it is, we have very few pathogenetic symptoms to guide us in selecting remedies, and hence empiricism plays too large a part in our use of remedies; and while we may *claim* that the remedy which effects a cure is therefore Homœopathic, unless we have a proving to correspond to our case we cannot establish our claim before an impartial jury. We have at present, more than ever before, women who, as members of the profession, must realize the importance of this work, and some measures should be adopted to establish and endow, if necessary, a school of proving to which they might be induced to lend their aid, where thorough work and reliable observations could be secured and recorded. When this has been done, it will enable the general practitioner to cure a still larger proportion of incipient diseases without the aid of the gynæcologist, and at the same time will give to the specialist greatly increased means of successfully treating the more serious diseases of women, and rendering surgical treatment a much less frequent necessity.

Secondly, there should be greater accuracy in the observation and reporting of cases in order to make clinical experience a more reliable guide. Accurate diagnosis by physical examination is essential in every case if we are to pretend to state the pathological condition. Yet so many instances are on record in which cures of definite conditions, as of endometritis, or even tumors, for instance, are claimed, in which it is found upon investigation that no examination was made and hence no knowledge possessed of the pathological changes

present, that it not only renders these reports worthless as evidence, but it throws suspicion upon all such claims. And again, cases in which no records are kept, and which may have occurred some considerable time previous to being reported, are so likely to be smoothed over and rounded out with the lapse of time that they take on a form and appear to have a significance which could not be depended upon and which destroy their value as evidence. It is important, then, that we keep written records of the cases we report, and that we have a definite knowledge of the objective as well as subjective symptoms in each case. Who can doubt that with these conditions, with the greater knowledge of the Homœopathic remedies which thorough provings by educated women would afford, a showing could be made of Homœopathy in gynæcology which would surprise even its most ardent friends. This we may hope for at some future World's Congress, but at this time I can only ask, in closing, that the army of family physicians here present substantiate my claim that Homœopathy in their hands cures a large proportion of women's diseases and renders its adherents much less subject to such ills than those otherwise treated; and by the gynæcologists I hope to be reinforced in my claim that we have in Homœopathy a means of curing many conditions which baffle all other resources, and that in aid of surgery it has proved itself a reliable and powerful ally.

Discussion.

A. C. Cowperthwaite, M.D.: As I heard this most excellent paper read, the thought came to me, what if it were possible to-day to have presented to us a panorama of those silent yet actual witnesses to the benefit that Homœopathy has been to gynæcology. We ourselves would be astounded at that which has been accomplished without even our own knowledge. At the same time another thought struck me in a little different direction, and that was, that in all that Homœopathy has done for gynæcology it has not done one-half, or one-tenth, of what it would have been glad to do if it had only been given half a chance.

We must admit that when a man becomes a specialist, his tendency as the first speaker of the afternoon said. is to become an intense specialist, and so we find that while not all, a great many gynæcologists become so wedded to their instruments and their mechanical measures that they forget the power of the armamentarium that they have behind them.

I am glad to hear a paper like this, even if our brother does pre-

scribe his remedies in crude doses and apply them locally. I have always been one of the number that believe we had to do that. I remember I had to get out of the hotel at Milwaukee where I was one of the charter members of the International, because I would not subscribe to the doctrine of never using local applications. But at the same time that does not fill the bill entirely and exclusively. We should not for one moment forget that there is something in the powerful action of potentized, or if you prefer, "attenuated" drugs, that reaches beyond and deeper, and does more than the mere local applications of drugs, no matter how beneficial that may be to certain local conditions that may exist.

I remember reading some years ago a very beautiful account, written by Dr. Mercy B. Jackson, of Boston, now deceased, of her own experience of the effects of Sepia upon her own person when suffering from uterine displacements. She said that she could feel that medicine, by its mighty power, raising the uterus into position, and it did it and it stayed there; and there are plenty of Homœopathic physicians who have had similar experiences in their own practice. I want to ask of you to-day candidly, how many gynæcologists do you suppose carry Sepia around with them as one of their chief anchors in the treatment of diseases of women? I never have known one yet. I do not care how you use it, we have in this one remedy, Sepia, one of the grandest remedies of Homœopathy and yet one of its most neglected ones.

Now to come to the point made in this paper which I consider of far more benefit to us here to-day as being of some assistance in helping us develop something in this line than any other part of this all-valuable paper. That is the suggestion that has been made to the ladies. I have often wondered why the lady gynæcologists did not band themselves together for the good of their common sex. Why it was that, knowing as they do know the tortures that are being continually perpetrated upon their sex by gynæcologists, they do not put their heads together and try to see how to modify these measures; yet there is very little tendency in that direction.

I was told by a gentleman, and I hope if he is present he will pardon me, that while he had nothing to say about male gynæcologists, if he wanted one that was real harsh, and would stretch and tear and bend, just give him a woman gynæcologist; that they did not seem to have any feeling for their sex in these matters. Now that may be not altogether so, but think for a moment if there is not some truth in it, and if it is not a proper thing for the ladies in the Homœopathic profession to follow the suggestion laid down in this paper; to go right to work and see what more there is in Homœopathy that has not been applied in its proper methods. Organize provers' clubs, which you alone can do; conduct them according to your own wise methods; establish the value of our remedies in a way

that none but yourselves can possibly do, and then show to the world by the practical application of these remedies what Homœopathy can do for gynæcology.

I believe, as I am one of those who have always very strongly favored ladies, that this suggestion will be taken as coming from a friend.

And so we find that Homœopathy has done something for gynæcology. We cannot give a long row of blooming statistics here to-day. We might give many. The statistics are hidden in the quiet recesses of many hearts and even some of those hearts that have been most benefited know it the least; and so, if we will but take to our bosoms the truths that have been given us by Dr. Phillips and have less of our mechanical and surgical measures and more of our therapeutics—combining our Materia Medica more completely and thoroughly with our mechanical measures—in ten years from now there can be a great deal more said as to what Homœopathy has done for gynæcology, than can possibly be said to-day.

W. P. McCracken, M.D.: I would like to make a cry against the over-local treatment, and to do it clearly and concisely, and in five minutes. I will give you a case. A young girl of twenty in the fall of 1873 became very ill suddenly. She was taken to old Dr. Foster of Clifton Springs Sanitarium. It was pronounced a nervous and mental trouble, and Dr. Prince, whom some of you may know, was her physician. She was there six months. In the summer of 1874, at her own request, she went to Dr. John P. Gray, of Utica, and between the summer of 1874 and the fall of 1878 she spent three years and one month in the Utica Insane Asylum under John P. Gray's care and that of his colleague, Dr. Andrews, who has since become superintendent of the Buffalo Insane Asylum. The first time she was there was twelve months, the second time twenty months and the third time six months. She realized as well as John P. Gray did, that he considered her case hopeless, and he let her go at the end of six months, thinking that she would return soon. While she was in a comparatively good state of health, he thought she might as well be at home with her widowed mother. In the spring of 1878 she was taken as a last resort to Dr. Robinson, of Albany—a Homœopathic physician—who insisted upon a local examination. He assured all her friends that there was enough trouble to have caused all the nervous and mental disturbance. He gave her local treatment steadily six to eight months at a time, from the year 1878 until fate brought her to Chicago in 1883. I do not mean that he was all the time giving her local treatment, but that he would treat her for a few months, dismiss her as well, and a few months afterwards the nervous and mental disturbance would return, and she would return to her physician.

In 1883—pardon me for the allusion—she came to Dr. Ludlam,

of Chicago, and after carefully studying the case and carefully affiliating the remedy, he prescribed for her. He did not examine her. He gave her no local treatment and she only took twelve of his prescriptions at a dollar each. Ten years have since elapsed without any recurrence of her nervous or mental trouble.

I should also like to say a few words in a very humble way from my own office, as I only graduated in 1887. It has always been my aim and policy to try and affiliate the remedy without local treatment. When my knowledge of Materia Medica fails me, then I give local treatment, and with the result, I presume, that you all have realized.

JULIA ROSS LOWE, M.D.: It was not my intention to say anything this afternoon, but I wish to speak as to two remarks, one in the paper and one in the discussion, which attracted my attention. Speaking of Sepia restoring a dislocated uterus, I believe in remedies effecting a great deal but I think that is asking too much. I do not believe that Sepia or any other remedy will restore a dislocated uterus any more than it will a dislocated arm.

One of the speakers said that of all the heroic treatment he had ever seen, the worst came from women gynæcologists. I am a practitioner of many years' standing. I have had in my office many women, the victims of malpractice, and only one of some twenty-five that I can recall came from the neglect of a woman physician. I have seen women sewn and torn and maltreated by men, but only one can I recollect that was maltreated by a woman physician, and she sent the patient home from her office some miles with a sponge tent. I think it was neglect.

Now this is not a criticism upon men practitioners, and I do not wish it understood in that sense. I only wish to refute, from my own ten years' practice, the statement that was made.

J. C. WOOD, M.D.: A case, apropos to the one that was recorded regarding the effects of general treatment, after local treatment had failed. Some six months ago, I was called in consultation with one of the best prescribers in our State, to see a young lady who was suffering from melancholia, so much so, that an idea of removing her to an insane asylum was seriously entertained. The various prescriptions had been made without avail. The patient kept getting worse and worse. Her melancholia was of a suicidal type, and her condition was most deplorable. An examination revealed a bad retroflexion of the uterus, which was overcome by a pessary. Some two weeks ago, the patient came into my office and greeted me. I hardly knew her; and she said: "Doctor, you came to see me, some six months ago, when they were talking about taking me to an insane asylum. I want to tell you how perfectly well and perfectly happy I have been since you fitted that pessary."

This was a case which could not possibly have been reached by

internal medication. At least, internal medication had been given a most thorough trial. It was a case eminently proper for local treatment, and I think, as gynæcologists, we have got to discriminate in those cases. I think we should ordinarily try our internal medication. I believe in the power and efficacy of the Homœopathic remedies for these conditions, under suitable circumstances; but, while we are doing this, there is a danger or an evil which is more prevalent in the Homœopathic than in the Old School, because of the belief in the efficacy of the Homœopathic remedies, and it is that of neglecting local examination, and overlooking and neglecting the malignant conditions. We expect to have, this afternoon, a paper upon the subject of "Vaginal Hysterectomy." That very important subject, and very important operation, has reached a point where, if we get our cases in time, we can save a goodly per cent. of them; but we have got to get them in time, and there is danger, I think, if we rely too absolutely upon our internal medication, of neglecting our examinations until malignancy comes, particularly in that class of patients approaching the so-called cancerous age; and I know, from my own personal experience, that the general practitioner relies too absolutely upon internal medication for controlling symptoms, the cause of which he should seek by local examination.

Now, I say that I believe in the efficacy of internal medication, but I was glad to hear one of the other sex get up here and proclaim the absurdity of trying to set a uterus by the internal administration of Sepia. It is such absurdities as this that make Homœopathy ridiculous in the eyes of the public. Subjective phenomena are liable to be mistaken.

R. Ludlam, M.D.: I cannot resist having one word on this subject. First, I want to express my thorough appreciation of the paper by Dr. Phillips, which we have been discussing. I like such a paper. We do not have enough of them. It is careful, practical, and discriminating. It is not too enthusiastic. It is sensible, and will be useful. I like the suggestion immensely as to the duty of the women in this Institute.

The crowning argument for the admission of women to the floor of our national society, after Dr. Mercy B. Jackson, Dr. Swazey, and a lot of other great physicians, who have gone to their rest, had knocked at the door for several years without getting in, was made by Dr. Carroll Dunham, and that argument was in exact line with the recommendation or suggestion of Dr. Phillips.

We want the women in the Institute. We need them as provers. They can make provings that none of the rest of us can make, or can even superintend. That argument brought them into the Institute, and it was my pleasure to put the question when they were admitted, and I shall be proud of it if I live a hundred years.

I am glad this subject has been discussed, because it is shown

to-day that it, like every other, has two sides, and that people may be very honest in their views on either side, that we grow and learn by contact, by coming together and comparing our experiences.

I believe most heartily in the efficacy of Homœopathic remedies for many diseases of women. I am perfectly satisfied that the scope of the remedies will grow and the utility increase as time goes on, and we will learn how to apply them; and that just in such ratio, the coarser, cruder and apparently more cruel surgical means that we have to resort to now, will be used less and less. Upon the other hand I believe that surgical measures in the right hands, guided by the right brains, are useful and will always be useful in this specialty.

I cannot hear any reflection upon gynæcologists as a class, I mean the better ones, without a little bit of resentment. What under heaven would we have known of gynæcological diagnosis without the gynæcologists, and what would our testimony be good for as to the efficacy of Homœopathic remedies if we were not competent to make a careful diagnosis? Therefore I say we need the gynæcologists. We cannot be good theoretical gynæcologists until we are good diagnosticians.

There are two sides to this question, and when we are interested in one we are apt to forget the other. I could not help recalling the story told by Henry Ward Beecher about the old darkey who fished all day, and toward the end of the day canght a catfish. He threw it back into the water disgusted and said, "When I goes catting, I goes catting; but to-day I'se piking."

We must be careful not to insist too radically on our experience as being all one way, or all the other. Let us be well balanced, well poised, and then our experience, and what is more, our advice, will be worth something.

Alfred E. Hawkes, M.D., Liverpool, England: I should like to add my testimony, and I cannot say how delighted I am to hear these expressions of opinion. My position is just in a nutshell. I believe firmly and sincerely in our medicines, and I try as far as possible to put off an operation. I have now several cases that come to my clinic at home where the ovaries and what not have been condemned by operation, where I have been able to give medicines and get a cure. I have had the happiness of talking to a good man, a very excellent friend of mine of the other school of medicine, who declared that whereas an operation in his opinion was necessary and called for on a previous occasion, now no such necessity existed. I think that such medicines as Palladium and Apis, with Stannum to come after Sepia, when the Sepia is not quite efficacious, will do a great deal with these cases, and that operations will become fewer and fewer as we understand the possibilities of our Materia Medica better.

I am glad to be told that so many ladies are practicing medicine,

and I am sure the greatest possible good will come to all from their combination with us of the sterner sex.

C. G. Higbee, M.D.: I can endorse everything said in the paper of Dr. Phillips. There is one remedy which I believe to be Homœopathic in its action, which I have found very efficacious in treating this class of diseases, which has not been mentioned. I believe the action of electricity in gynæcological cases is Homœopathic. I have had quite a large experience for several years in the use of electricity in these cases, and with excellent effect.

It is difficult to say at the present time with our limited—I think I will say—"proving" of electricity, just how it acts, but I believe it is through the nervous system, and that it re-establishes the capillary circulation which is at the base of most of these diseases. I know from the experience that I have had with it that it clears up many of those cases much more rapidly than I could possibly do with any drug that I have ever administered. Perhaps I did not select the proper drug or give it in a potency high enough, but I did the best I could. But before we give up our cases let us thoroughly try electricity.

Flora A. Brewster, M.D.: The doctor who has preceded me has stolen a part of my thunder. I shall have to begin where he left off. I believe a chief cause of the troubles which we gynæcologists treat in our offices is uterine œdema. I believe that in all the misplacements that we are called upon to deal with, if we could get the patient in time and could restore the muscular tone, we could prevent the misplacements. Unfortunately, we never get them under our care until the person is crippled, and I believe it is an absurdity to attempt, when all the bloodvessels are out of place, when the blood easily passes into the organ and it is almost impossible for it to escape, when waste matter is left in it and the organ is growing heavier, to restore that organ by medicines alone. Why should not we, as Homœopathists, use the very best means in our power to gain all the knowledge we can in restoring the human body? I believe if we would do that, very much of the opprobrium that is heaped upon the head of the poor Homœopathist might be averted. And I believe that one of the most effective means we have in restoring uterine tone is electricity.

Doctors have said to me: "Oh, the worst cases I have ever seen have been women that have been to an electrician." It is because they did not know how to use the battery. How many doctors are there that know what a current of tension means, or the difference between a current run through a long fine wire and one run through a coarse heavy wire? You will get exactly opposite effects. One kind will decrease the inflammation and the other will increase it.

I know positively that a uterus, retroverted and imbedded in a

mass of adhesion, can have a current passed through it with perfect safety, and these adhesions can be broken up and the uterus lifted to its normal position. Not in one treatment, or three, or five. It needs a person of good judgment and large experience.

Dr. Phillips: I see very little reason for occupying more time. Nothing has been developed which makes me wish to express a different opinion or add to what I have said. The use of local remedies and internal medication goes without saying. The same indications which lead to the local use of Belladonna would lead to the internal administration of the same drug, and the internal remedy in my experience is almost always identical with the local.

In regard to Sepia, I would like Dr. Cowperthwaite to know that there is one gynæcologist in the United States that carries Sepia in his case, for I never go without it. I use it, not to replace a displaced uterus which has been impacted, but to strengthen the ligaments after it has been mechanically replaced.

J. M. Lee, M.D.: It was stated by one of the speakers that electricity in some way or another was sufficient to break up or to cure all cases of so-called pelvic cellulitis, and that if such diseases were not cured by the application of electricity it was because the operator did not understand the use of the agent. There are cases of adhesions that cannot be broken up with the fingers, and it is absurd for anybody to get up before an audience like this and state that electricity can cure those cases. I want to protest against any such talk as that.

Dr. Higbee: I haven't heard any one say that electricity could break up those adhesions. I do not believe they can be so broken up. It will stop their growth.

SOME OF THE CLINICAL ASPECTS OF SEPTIC INVASION.

By Edward Blake, M.D., London, England.

I do not doubt that you will all be prepared to admit that the most elevating conception of the highest and noblest of all professions is that which views it as a means of preventing disease. Because this is so, it is difficult to overestimate the importance of establishing ætiology on a sound and scientific basis. So swift have been recent strides towards this excellent consummation of our desires that it is quite impossible for a single intelligence to keep pace with them.

Though it is undoubtedly true that we can, with some measure of success, encounter certain manifestations of disease, knowing nothing of their real causation, it is equally true, that without ætiology we cannot do our best by our client to protect him from future visitations of the same malady.

We say most truly *felix qui potuit cognoscere causas*, for not only is some knowledge of ætiology needed for the prevention of disease, but some special knowledge of predisponents and excitants must deeply tinge our general selection of measures designed to afford relief to those entrusted to our care.

It is plain that there could be no State medicine without scientific ætiology.

Equally there can be no fixed basis of nomenclature; for example, have we not seen that the selection of names based on physical characters alone may lead, as in the absurd artificial classifications of skin diseases, to the most ridiculous results? Arranging smallpox with ecthyma antimoniale and erythema mercuriale with scarlet fever.

The only hope of a definite scientific taxonomy is to have the generic terms founded on physical or physiologic characters and the specific distinctions based on causation. Examples are "chon-

dritis arsenicalis," "synovitis traumatica," and "pharyngitis septica."

It will be then from the ætiologic side that I shall, with your permission, approach this important subject.

Acute Sepsis.—Concerning acute sepsis I shall have very little to say. In women its most typical, and certainly its most appalling form, is child-bed fever; a disease which has grown to be more rare since Listerism has come into vogue. A disease destined, let us hope, ere long to disappear altogether from civilized communities.

I was assured by Professor Victor Horsley, when he acted as Registrar of the Maternity Department of the University College Hospital, London, England, that the substitution of vaseline for lard on the hands of students, who went from dressing surgical injuries to the lying-in bedside, effected a perceptible diminution in the number of cases of puerperal septicæmia. Inasmuch as this disease is easily prevented and is nearly incurable, all our energies should be devoted to rendering the parturient woman and all her surroundings as aseptic as possible.

A few words as to the chief indications for managing a case:

1. See that the uterine cavity is absolutely clear. It is better to remove a part of the wall of the womb than to leave behind the very smallest portion of chorion after an abortion, or of placental membrane after miscarriage or labor at term.

2. Keep the cavity constantly irrigated with some warm solution of harmless antiseptic, such as boric acid, taking care that the egress-tube of the double canula employed be far larger in internal sectional area than the ingress-tube.

3. Keep the cervix patulous, and if possible arrange that the patient be in an appropriate posture for easy drainage.

4. Protect or remove needless absorbent surfaces.

Subacute and Chronic Sepsis.—We see examples of rather less acute septic intoxication in surgical erysipelas, established gonorrhœa, coprostatic urticaria resembling the form which arises from decomposing food, extensive cutaneous burn, diphtheria, pyometra, pyocolpos, otitis suppurans, and disseminated abscess, infective osteomyelitis, and in the so-called "zymotic" fevers.

The infinite varieties of toxine produced during these invasions of anabolic and katabolic tissue-changes, and by the decomposition of

pus, of mucus, and of other liquid products of the body, exhibit, when we consider their elaborate differentiation, a curious unanimity both in method of attack and in the selection of sites for action.

Thus, they all prefer to act on the endothelium and the epithelium of children. They prefer the nervous system of women and the joints of men. That is, of course, only another way of saying that the skin and mucosa of the young, the cerebro-spinal system of women and the joints in men, are either their weakest points, respectively, or else they are the most active in their efforts to rid themselves of poisonous material.

To avoid repetition I will consider the distinctive characters of subacute septic invasion with those of the chronic form, for, into the latter the former insensibly merge.

Skin.—Just as in acute sepsis, the skin affection is usually erythematous, so, in the more chronic forms, the cutaneous manifestation is nearly always some variety of nettle-rash. In the ill-fed and the aged, it may be replaced by petechial or purpuric affections.

Urticaria septica is sometimes seen in the course of chronic gonorrhœa, when it may be complicated with certain drug-rashes—such as the Copaiba dermatitis, which occasionally presents features resembling nettle-rash.

In a pamphlet entitled "Sepsis and Saturnism," in which I have shown the curious resemblance which exists between the *modus operandi* of septic matter, and of the soluble salts of lead, I have described a form of acne rosacea of the face arising from carious teeth. This may be compared with the septic rash (roseola enterica) seen on the abdomen of the typhoid patient.

Also, at page 15 of my work on *Septic Intoxication*, I have given an example of multiple symmetrical petechiæ occurring on the cheeks of an old lady, evidently arising from suppurating fangs, for it disappeared after the removal of the carious roots.

Purpurea has been produced by direct experimentation of poisoning by ptomaines, and there is little doubt that the diseases roughly grouped together as hæmorrhagic purpurea are, some of them, septic in origin.

I have elsewhere shown that nearly all the toxic eruptions may attack any portion of the epithelium. But there are favored sites.

Internally, the throat is, for many reasons, a preferred locality, as we see in diphtheria, scarlet fever, and some of the other zymotics.

Outside the body, the forearm is the most common site of septic rash. The musculo-spiral distribution is the area most frequently affected.

The musculo-spiral has a few peculiarities which we shall be repaid for noting. Developmentally it is a very old nerve, being found in the earliest types of anterior limbed organisms. In its personal habits it is a punctiliously polite nerve, and it never encroaches on its neighbors. Unlike the ulnar, which often reaches as far into the musculo-spiral area as the root of the index finger, the musculo-spiral shows no retaliatory spirit. It is a nerve of vicissitudes. Besides being perpetually and abruptly stretched during pronation, it receives most of the blows which reach the forearm. Being a silhouette or outline nerve, it is much exposed to the changes of external temperature. Many toxic eruptions appear first, either on its superficial area or on that of the fifth cranial pair. An example is iododerma, which is usually best seen on the forearm and the face. It follows occasionally the dressing of the endometrium with iodized Phenol.

The distribution of the musculo-spiral is the point to examine for the earliest manifestations of the peculiar eruption characteristic of uræmia. These are the so-called maculæ uræmicæ, first described, with anything approaching accuracy, by Le Cronier Lancaster, of Swansea, England. Here are also often first seen the xanthoma of osteo-arthritis, so often septic in origin.

These pigment spots on the forearm, yellow under the clothes, and Sepia-like where they are exposed, were first alluded to by me in the *British Journal of Homœopathy* in 1881. The various forms of dyschromia associated with rheumatism were afterwards, in 1885, most carefully and elaborately described by Dr. Kent Spender, of Bath, under the name of multiple xanthoma.

Next in order of frequency is the trigeminus or nerve of sensation of the face. Then come the cervical spinal nerves.

It is full of interest to note that the area of distribution of toxic skin—staining corresponds with the area of the distribution of osteo-arthritis. But I have already explained elsewhere why this should be so.* The toxines which induce abnormal pigmentation also have the property of causing rheumatic gout.

The xanthoma of septic goitre, of glycosuria septica, and of puru-

* See pp. 19 *et seq.* of *Septic Intoxication*, published by F. A. Davis & Co., 1231 Filbert Street, Philadelphia.

lent infection of the adrenals (Addison's bronzing), are familiar examples of the chromatic changes induced by chronic sapræmia.

A form of ptomaine pigmentation has been recorded by Dr. John Macpherson,* of Stirling Asylum, at Larbert, N. B., in an article entitled "Intestinal Disinfection," where he found that by destroying the toxines of the primæ viæ in lunatics by means of Naphthalin he could relieve insomnia and remove the morbid pigmentation of the skin which occurs in cases of melancholia. The relief given by Macpherson to his sleepless maniacs, by rendering their intestinal canal aseptic, brings us naturally to the consideration of the influence of sepsis on

Sleep.—It must not be taken that the absorption of septic matter is always an evil. We see certain persons who are always absorbing septic matter from dirty teeth or from neglected genito urinary catarrh, and who yet enjoy most vigorous health. This apparent contradiction is explained in the following way:

1. Degraded tissue-material, in minute doses, forms one of the normal stimuli of the heart; witness, for example, the exhilaration which follows exercise.

2. Larger doses over-stimulate the heart—athletic sleeplessness.

3. Over-doses cause profound sopor—toxic coma of extreme fatigue, of uræmia, and of puerperal septicæmia.

Sleep is also secondarily disturbed by the distressing itching of the dermatitis septica, which we call "nettle-rash." Apis and Sulphur relieve this. I have sometimes stopped it completely by giving a very hot bath, followed by painting over the affected part; after patting, not rubbing, the patient dry, the following solution:

Cocaine mur.,	gr. 2.
Chloral hydrat.,	ʒj.
Glycerine,	℥j.

Camphor, instead of Cocaine, and sometimes Sal ammoniac, will give relief.

The smarting may be stopped by

Ichthyol,	gr. 20.
Collodion flexile,	℥j.

Applied pure three times a day.

* *Journal of Mental Science*, January, 1893, London, England.

The Skin.—Disregarding the rarer and more recondite results of *sapræmia*, we will glance quickly at the ordinary superficial phenomena of passive poisoning by purulent products in a female patient.

As the subject of chronic septic absorption enters the room, we are struck by her death-like pallor. There are exceptions. Some women become sallow, some bronzed, so as to resemble a case of Addison's disease,* or one of the other disorders connected usually with xanthelasma. Others present discrete spots of melanosis, the favorite sites being, as we have seen, the forearm and the face.

I have already noted multiple symmetrical petechiæ on the cheeks of the aged, which have disappeared on removing rotten teeth. Purpura has been caused experimentally by injecting toxines into the circulation. Scorbutic petechiæ are possibly of this nature. There are grounds, too, for looking upon general hæmorrhagic purpura as septic in origin. Acne rosacea will follow pyorrhœa alveolaris, and vaginal xanthorrhœa is often associated with pustules on the chin (acne menti). The rose spots on the abdomen of an enteric patient are probably of the same nature. It will be remembered that they do not appear during the first week of the disease; in other words, till there is time for the establishment of necrosis in the neighborhood of Peyer's patches.

Raimondi found the same atrophy and degeneration of the bone marrow in saturnine cases as appears to occur from septic causes in the course of male urethritis.

A profound and inexplicable hydræmia† should always arouse our suspicions of septic intoxication or of lead poisoning.

In old cases of septic invasion the corner of the mouth is prone to show a fissure. This cracking of the lip commissure appears preferentially on the side of habitual decubitus. It is not quite so insignificant a matter as might at first blush be thought, for the act of opening the mouth becomes so painful that the patient would cease to eat unless the corner were protected. A strip of adhesive plaster serves sufficiently well for this purpose. I have in these cases tested the saliva both before and after food. I have found it acid even when escaping from the salivary duct, antecedent to its admixture with the mucus of

* Addison's, Drummond's, and Nothnagel's diseases are all probably septic.

† Compare with recent observations by Dr. Archibald Garrod on the blood changes of rheumatism.

the mouth. It is possible that the mere subalkalinity of the blood which passes through the cortex* may induce various neuro-psychotic phenomena, as ill-temper, headache, despondency, chorea, or epilepsy. We know that the last of these is influenced by the various salts of *Sodium* and *Potassium*. This property, possessed by the alkalies, of modifying some nerve storms, may depend on mere chemical action rather than on any specific relation to the pathological condition. The advent of the epileptiform convulsion is aided, doubtless, by the contracted state of the cerebral arterioles.

We have been accustomed to view puerperal convulsions as in part sapræmic, but chronic idiopathic epilepsy, not unusual as a result of lead poisoning, is not ordinarily recognized as a septic symptom. Professor Wood, of Michigan University, has narrated the particulars of a case, and I have myself placed two on record.† One showed *petit mal*, associated with depravity, the other genuine epilepsy.

Recurrent nettle-rash, as well as lichen urticatus, especially the post-partum form, should lead us to search for septic intoxication, and to take immediate steps for its remedy.

Hyperidrosis of the hands, the feet and the axillæ is by no means uncommon in sepsis. Compare this with the localized sweats observed by Dr. Kent Spender in the course of osteo-arthritis.

Drs. Ord and Spender have also pointed out various sensory perversions as occurring in the course of rheumatic gout, itself often septic in origin. Such are lightning pains of the lower extremity, a sense of tearing up of the skin, spots of anæsthesia and of hyperæsthesia. These are common in septic cases. They serve to show that rheumatic gout is not merely a disease of the joints.‡ Rheumatic tremors point in the same direction.

The temperature of the extremities rises during the chondritic stage of rheumatic gout. *This increase in surface warmth is often diffused in the neighborhood of an articulation; it is not confined to the point of incidence of the arthropathy.* Afterwards the limbs are prone to be purple and chilled. The arterial tension § is heightened

* Compare observations of Hughlings Jackson.

† *Septic Intoxication*, pp. 52, 53. F. A. Davis & Co., Philadelphia, 1892.

‡ Compare with Charcot's disease and with tabes.

§ On September 6th the right radial of a gentlemen, aged 72, recorded 9 ounces whilst sitting down. Late in September he contracted a sharp attack of urethritis,

at first by septine and is followed by increased vigor of ventricular contraction. But there is a later stage in septic invasion, where the systole is defective even to the extent of developing anginous symptoms, as I have more than once witnessed.

Mental solicitude and gloom are nearly always present in septic patients. The memory is sometimes seriously impaired during or after sepsis—as, for example, from enteric fever and diphtheria.

The Digestive Tract.—The septic tongue is peculiar, the type of acute sepsis being the enteric tongue; in chronic cases it may be coated, sometimes preternaturally clean, with raised, irritable papillæ. Sometimes very thin at the edge, often œdematous—showing the marks of the teeth.

In acute sepsis, as after diphtheria, we may have pharyngeal paralysis; in acute saturnism, we get spasm of the pharyngeal constrictors. Both are prone to be followed, at a later stage, by incoordination of the muscles concerned in the swallowing.

Loss of appetite, resulting in emaciation, is common in both these poisonings.

I have seen three cases of recurrent gastralgia—of six weeks', three years', and ten years' duration respectively—disappear on removing pus deposits. We have seen that Sepsin appears to possess the property of causing pain, called "gastralgia," in the terminal twigs of the anterior or ventral branches of the fourth, fifth and sixth dorsal nerves.

Drs. Pearson Irvine and Wm. Pasteur have shown that death from diphtheria, especially in boys, may come from paralyzed phrenic. This is confirmed by Suckling, of Birmingham. It is interesting as showing another point of contact between septic toxis and lead poisoning; for phrenic palsy occasionally closes the scene in acute lead poisoning.

One of the last results of old-established septic intoxication is

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and the tension rose to 10 ounces. A man of 36, with acute urethritis, showed 10 and 8 ounces in right and left radials. Out of 36 patients suffering from various slight disorders, 32 had differing radials. In 26 the right was the more vigorous; a greater disproportion was observed in women, whose tension rules much higher than that of men. Six persons, including both sexes, had the left higher. Four only were symmetrical. 16 ounces right, 12 left, was recorded in septic goitre, with chondritis, eczema and severe varicosis, associated with suppurating endometritis, in a woman of 51, wife of a seafaring man. The observations were taken by means of Dr. Rayner Batten's manometer.

hepatic disease of lardaceous type. In these cases the liver ceases to seize upon and change the various degenerative gastro-intestinal products, which now enter the general circulation and prove most pernicious, especially to the nerve centres.

The Eye.—The eye-symptoms of sepsin present a superficial resemblance to those of lead, but there is a deep-seated difference.

The septic affections of the oculo-motor apparatus generally are familiar to us after diphtheria. There are good grounds for suspecting the existence of a septic glaucoma. Dr. John Brown, of Bacup, Lancashire, England, in his graduation thesis, dated 1889, recorded a case of acute glaucoma, which, though the eye-symptoms came on in the course of plumbism, may be viewed as saturnine; for it occurred in a woman fourteen days after her confinement, so it probably had septic elements in it. Mr. Lennox Browne, in his work on diseases of the upper respiratory tract, gives details of a very remarkable case of septic glaucoma. Mr. Browne quotes also some American observations on the same subject.

Sepsin is very prone to produce supraorbital pain, sometimes symmetrical, more frequently sinistral, rarely on the right side. The lead headache, when lateral, is on the right side. The actual recorded relation is 7 to 3. Asthenopia is common to both lead and sepsin. The defective vision of sepsin is usually an accommodation error of temporary character, but persistent blindness from optic atrophy has more than once followed poisoning by lead. It is curious that sepsin appears to pick out the nervous and muscular structures and choroidal coat. Lead first attacks the vessels (hypertrophic peri-arteritis) of the retina. This has been verified by John Couper. The observations of Dr. Rayner D. Batten* make it likely that septic saturation may intensify myopia. I once saw capsular cataract with descematitis supervene in a man of forty, on ulceration of the gums, probably of specific character. Mr. Juler, of St. Mary's, tells me that he, too, has seen cataract co-existing with intra-oral suppuration.

The Ear.—Ten persons poisoned by lead had tinnitus aurium, which is a common symptom of sapræmia.

An aching myalgia is very typical of septic poisoning combined with the "fidgets" (anæmia of anterior cornua), reminding us of

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* *Ophthalmic Review*, January, 1892.

saturnine muscle-ache and of the actions of certain vegetable poisons, such as Actæa racemosa, of Arnica, Eupatoria, Baptisia, and Rhus toxicodendron.

We have seen that gastralgia of persistent type may arise from passive septic invasion. There is little doubt that many of these cases are associated with unsuspected gastric ulcer.

I shall seek in another place, and at another time, to show that there is a form of gastric ulcer related to Charcot's perforating ulcer and to chronic scrofulous sinus. It is a kind of circumscribed caries of the stomach analogous to dystrophic dental decay. It is a local necrosis of neurotic origin.

The Thyroid Gland.—I have, in my work on *Septic Intoxication.* placed on record some curious examples of paludal and septic goitre. I say, in deference to ordinary modes of speech, "paludal" and "septic," though in reality these are identical. It may be supposed that marsh miasmata consist of the products of decaying vegetable matter only. But a little thought will remind us that there is no swamp which does not teem with myriads of minute, short-lived animal organisms. These perpetually perish and become putrescent. Their toxines mingle with the products of decomposing vegetable life. Miasmatic invasion and septic invasion are then one and the same thing. The clinical history of the symptoms closely coincide, and the same germicidal remedies benefit both. We have in ague a paralysis of the sympathetic with the natural circulation changes and the same arrest of hæmatopoiesis as in passive septicæmia. The stress of ague may fall in women with its greatest impulse on the nervous system ; in men, on the articulo-muscular apparatus.

The influence of the miasmatic poisons may forsake the general nervous system and confine its effects to the floor of the fourth ventricle, and thus lead to goitre. In the same way, some persons exposed persistently to ordinary toxines will, instead of rheumatism or neuralgia, show a bronchocele with or without proptosis.

Discussion.

M. O. Terry, M.D.: The paper which we have just heard is one deserving of our serious consideration. Its clinical aspect makes it exceedingly practical and causes us to wander into other fields in line with the subtle invasion of sepsis of various forms. Many years ago I noted the fact that a mother lost her life by kissing her son,

who had died of a malignant diphtheria. It has frequently come to my notice that syphilitic sores have been contracted in kissing. Recognizing the fact that there are many diseases septic in character which may be communicated from person to person, I took the position in a public address, delivered five years ago, in which I criticized the manner of administering communion service as given by all churches excepting, I believe, the Roman Catholic. I have recently noticed that this subject has been under serious consideration by the Secretary of the State Board of Health of Ohio. Only a few months since, I had a very peculiar case of septic invasion. I had a case of hysterectomy nearly well. In fact, the patient was sitting up. The abdominal cicatrix was nearly healed. All of a sudden, to my surprise, one day I found my patient having a temperature of 105°. As she had been given vaginal douches, I became suspicious at once that septic material had been introduced in this way. I found that I had good reason for my suspicion, that the douche tube had been used on other cases, and that simply carbolic acid had been used for cleansing it. Carbolic acid has its sphere of usefulness, but is hardly adequate as an antiseptic to destroy certain septic germs. I had an opportunity of proving that a few years ago, when I poisoned two of my fingers. I tried a crystal solution of carbolic acid on one and a strong solution of nitrate of silver on the other, but still my fingers continued to suppurate. I was speedily relieved, however, by a solution of bromine (1 to 100), one of the most wonderful remedies we have in the Materia Medica for poisonous wounds of all sorts. We have a sample of septic invasion in that plain, everyday boil, when it becomes a grandfather in its carbuncular state, the pus cell insinuating itself into the surrounding connective tissue, or when it is carried by the lymphatics to other parts forming focal centres for septic invasion, which begins as a small boil, developing frequently into a carbuncle. The practitioner of to-day, if enabled to carry out his instructions in a case of diphtheria, no longer fears what was once an expected direful result in his case, for scientific medicine has shown that a thorough and constant disinfectant, applied to the throat night and day so completely as to thoroughly remove every vestige of odor will prevent the septicæmic and destructive invasion of ptomanic poison. We believe the paper of Dr. Blake will be suggestive for many more causes of septic invasion, a few of which I have mentioned being samples of the numerous causes which, if remaining unnoticed, cause the death of many a patient.

THE RELATION OF SURGERY TO GYNÆCOLOGY.

By Charles E. Walton, M.D., Cincinnati, O.

Some years ago there appeared in Madison Square, New York City, a colossal hand; neither its functions nor relationship was readily discerned. It projected above the greensward as though some mighty Titan had been poorly buried, or as though some mythical creature were again emerging from the dreamless sleep of an ancient sepulture. Though bared to the wrist only, it towered high above the head of the observer who gazed with awesome curiosity upon this emblem of marvellous skill and power and wondered at its significance. It was the hand of Bartholdi's Goddess, destined to light a universe.

Years passed, and across the water the body of this famous goddess was assuming form under the deft direction of its originator. When the hand was next seen it had abandoned its long divorcement and appeared as the crowning glory of the statue, piercing the blue ether far above its Parisian surroundings, and ready to again cross the ocean, leading the fair goddess to her permanent home, where she should stand beneath the effulgence of its radiant torch. There she stands to day, personifying "Liberty enlightening the world."

The relation of surgery to gynæcology is not unlike that of the torch-bearing hand to the goddess of Bartholdi, which symbolizes the upward and onward progress of art, and illuminates not only itself, but also all that comes within its influence. So surgery symbolizes the growth of medical art, illumines the entire gynæcological structure, and throws its light upon the whole world of medical science.

What has surgery done and what is it doing to merit so great an encomium? It has turned, and is turning, doubt into certainty, ignorance into knowledge, insecurity into safety.

Gynæcology was but a stumbling and a halting child before the strong hand of surgery led its wavering footsteps firmly by the pit-

falls of uncertainty and developed its unsteady gait into the sturdy pace of athletic progress.

For the purposes of this paper we take gynæcology to mean that branch of medical science which pertains to the anatomy and physiology of the special organs of generation and their immediate surroundings—the ætiology, pathology and management of their diseases. As the management of gynæcological cases must be either surgical or non-surgical, we take the term surgery to mean that science which develops the principle of mechanical and operative procedures for the relief of any disease and determines the principles of their application.

It is not the intention to institute invidious comparisons between operative and non-operative methods of treatment; for they are so intimately joined, and their objects so identical, that they must ever be considered as forming a union whose unity of purpose is its strongest bond, but still it may not be unprofitable to pass in review the achievements of surgery which have brought fame to gynæcology.

The progress of gynæcology during the last twenty-five years is marvellous, but rendered so by the triumphant march of surgery, which, like a veritable Moses has led and is still leading the gynæcological hosts up out of the wilderness of crudity. The scalpel in *living* tissue is the open sesame which unlocks both pathological and functional mysteries and brings nearer to our grasp the very secret of life itself.

Before passing to the consideration of specific performance let us emphasize the fact that in antisepsis, or the more refined asepsis, we have the foundation for the brilliant surgical exploits of which we are so justly proud. The renown of surgery no longer depends upon the glamour of *exceptional* success, but upon that uniformity of result which must ever follow the recognition and application of universal principles. Primitive surgery and modern surgery do not differ alone in the application of the principles of antisepsis, but in the development of principles which govern the process of repair and the recognition of pathological methods and new insight into physiological function. Primitive surgery was, of necessity, external surgery and experimental. The auto-amputation of extremities led to initiative surgical procedure. Modern surgery, and especially gynecian surgery, is *internal* surgery and demonstrative, and marks

the highest degree of adaptation of principles deduced from external work. The so-called citadels of life are no longer defended against operative attack, yet here, as in primitive surgery, we work upon the periphery.

Accidental surgery has been the precursor of deliberative imitation, the tamping-rod emphasized the use of the trephine, and the ripping horn of the infuriated animal, whilst it led us to fear the bull more, has certainly caused us to dread the peritonæum less. Two cavities were thus opened whose viscera are now daily attacked by the knight of the bistoury.

Primitive abdominal surgery was first confined to the repair of accidental injuries. When the intestines protruded through a wound in the abdominal wall, the prudent surgeon cleansed the bowels and replaced them, sewed up the rent, and gave his patient rest; a rest which was not always the one which knows no waking. When the intestines were wounded, however, long and patient study was required before modern surgery evolved the rule which not only justifies but commands the immediate laparotomy which furnishes exact scrutiny of the parts injured, and an opportunity for the application of exact operative methods. In this, gynæcology has been the gainer. The operative problems which have been presented to the gynæcologist, have, many times, been solved in advance through the development of surgical truths and principles which are found to be the most valuable when the most general in their application. When the harassed gynæcologist of the non-operative type has exhausted all the resources of mechanical and medicinal methods in the vain endeavor to restore a retroverted uterus, and asks of surgery for assistance, the answer comes unhesitatingly—open the abdomen, release the adhesions, and anchor the uterus to the abdominal wall; or, after the method of the Alguie-Alexander-Adams operation, take a reef in the round ligaments.

Are the ovaries and tubes caught within the octopus grasp of a pelvic inflammation, and deprived of their liberty of action, the appendages are removed, and the patient relieved at least of one great source of irritation or nerve waste. Do they develop a cyst whose ever increasing pressure not only imperils the comfort but the very life of the patient; surgery leads the gynæcologist to remove the cyst as soon as discovered, and not to still further jeopardize the patient by inane assaults of the aspirating needle! Does a persistent

intra-metritic hæmorrhage drain the vitality and resist the "indicated remedy," surgery curettes that uterus, clearing it of placental débris or granular proliferations; the devastating current is stayed and damage soon repaired.

Has a cervix or perinæum yielded to the force of a parturient assault, surgery restores their autonomy; saving the patient on the one hand from a cancer-breeding nidus, and on the other hand from a displacement-courting impairment.

Do fistulæ deflect the natural course of rectal and bladder contents, the surgeon's skill repairs the openings and the excretory channels resume their normal functions. Does vesical wall or rectal pouch encroach on vaginal space, the surgeon, with the skill of a modiste, takes a tuck in the redundant tissue and each viscus is restored.

Does the sturdy gonnococcus, ambitious to conquer new territory, invade the secluded precincts of the Fallopian tube, and there multiply and replenish its pus until the confines of its operations swell to dangerous proportions, surgery again rescues the patient, and puts those tubes where the coccus must cease from troubling, and menstruation takes a rest.

Does the erratic myoma explore peritoneal space, or, seek the outer world through polypoid transmigration, or, stay at home and enjoy its intra-mural development, it falls a prey to the surgical poacher, who does not hesitate to remove, not only the game, but the very preserves in which it abounds.

Does that great enemy of womankind, the cancer, attack with all its malignity the primitive home of fœtal nativity, and seek to overthrow with inevitable encroachment the temple dedicated to the cause of maternity, the alert gynæcologist knows that the only hope of rescue lies in a total surgical ablation. Medicine has not yet furnished the remedy, and surgery, at best, furnishes only a possible reprieve.

Does pelvic inflammation run riot in the delicate tissues which form the uterine surroundings, and, by the violence of its assault, melt all before it in the fury of a purulent conflagration, the early relief of the surgeon's knife furnishes the speediest means of staying its ravages, and supplements, with potent co-operation, all therapeutic endeavor.

Does pain, with continuous grasp, wring from the chronic sufferer the imperative cry for help, and surgery, with deft skill, remove the

innocent appendages and leave the pain behind, gynæcology has even then been a gainer, and diagnostic acumen receives a new impetus and finds in the uterine cavity the hitherto unsuspected pathology.

Does gynecian physiology look to the ovaries for the explanation of menstrual phenomena, and call upon surgery to remove them, in the vain hope of preventing the periodic flux, it finds that the unsacrificed tubes have a function which has certainly been overlooked.

Does the wily tumor, with almost sentient perverseness, defy diagnostic skill, the scalpel lets in the search-light of observation, and the wandering kidney, the cystic kidney, the hydro-nephritic cyst, the renal calculus, the mesenteric sarcoma, the tubercular agglutination, the lithopedion, the stay-liver, the malarial spleen, the pancreatic cancer, are all revealed, and a prognostic prediction saved from a diagnostic defeat.

Does the question arise whether ovarian autonomy depends upon uterine persistence, the hysterectomy determines that ovarian life is a separate life, and exists just as certainly as the human face after the mirror which reflected it is shattered.

Does a tuberculous peritonitis invade the abdominal cavity, thickening the delicate lining of that enormous lymph sac, studding intestinal wall and swelling mesenteric glands, surgery gives gynæcology another triumph, and, by its exploratory incision, changes the whole aspect of affairs—a pathological miracle is wrought, and the grave literally robbed of its victim.

But enough! Why multiply examples? Modern gynæcology is a splendid structure, but the hand that holds the torch is the hand that holds the knife.

Discussion.

H. E. Beebe, M.D.: The subject is certainly one which has been well handled, and I gladly admit my incapacity to add to or justly criticise the paper of my friend Dr. Walton.

To any candid observer it must be plain that progress is stamped upon the doings of everything closing the scenes of the nineteenth century, whatever be the department.

Effective work in all branches of science and art is the basis of success. Specialists are ever in demand.

Positive specific results must be attained to merit worthy commendation. To-day "fads" are short lived; the twentieth century is to be inaugurated with fewer shams. Perfection is the goal in view.

Surgery is not an exception, and it is impossible to ignore the prominence which gynæcological surgery has everywhere assumed. It is called to accomplish what non-surgical agencies have failed to do—mechanically correct false physiology and pathology.

Abnormalities are to be ameliorated, and cured, if possible, and that too by the most conservative measures. This may be by simple methods or the most expert work.

Effective surgery depends upon knowing when to use it, skill and thoroughness in its performance and efficient after-treatment. Many surgeons are good operators, but are careless in the subsequent attention. To avoid infecting the wound is as important as brilliant operating.

Surgical diseases of women are no small part of the gynæcologist's practice. Of morbid growths alone, both malignant and benign, affecting the human race, more than 75 per cent. belong to the female organs of generation and are either uterine, ovarian or mammary.

With this fact, and knowing that morbid growths are but a small part of the surgical diseases of women, certainly there is a broad field for surgery in this specialty.

About one-third of all physicians claim to be gynæcologists. To fully ninety-nine-hundredths of this number the teachings of diseases of women have not been thorough and practical. The average gynæcological specialist is capable of doing many of the simpler operations through the natural passages, but it is a great mistake for amateurs who have never done major surgery to attempt operations through artificial openings involving the peritonæum, such as are considered in this paper.

The surgical novices have no business doing this internal major surgery. Few gynæcologists are trained abdominal surgeons; they have not spent enough time in the study of visceral anatomy in the dead-house, nor been in the clinical fields, eye-witnesses "to the scalpel to living tissue" by experienced operators. Training and experienced observation are very necessary for so important a work.

To depend upon self-experience alone to learn major surgical gynæcology at the patient's risk is a responsible matter. Abdominal surgery is a specialty within itself, and needs as much preparation as any specialty.

There are too many laparotomies done and too many untrained operators are doing them to the great detriment of justifiable work. The surgeon lacks acquired knowledge and skill, besides the facilities for doing good work. Seldom, except in emergency, is laparotomy warrantable without a room thoroughly prepared for it.

Skilled abdominal surgeons to-day have a uniform mortality of only about 10 per cent., and a per cent. greater than this usually means incompetency.

The advance made in this field, and so well shown in the paper,

has been by experts well trained in antisepsis and the anatomy, physiology and pathology of the female organs of generation.

They knew what to do, when to do it, and how to do it. They knew "the relation of surgery to gynæcology," and that "the hand that holds the torch is the hand that holds the knife."

Dr. Hanchett, of Omaha: I am not here to criticise this noble paper which has been read, but to say "amen" most heartily to it. I make no claim to being a gynæcologist. I treat some cases in my office, as all physicians in general practice do, but I want to say to every general practitioner here that when we have a case of operative surgery in the line of gynæcology we should send it to a specialist. I have seen in my own city, and many of the western cities of this country, many a life lost by foolish operative surgery on the part of so-called gynæcologists who did not understand their business.

M. Ayers, M.D., of Rushville, Illinois: I live in a little country town, and we have a few patients of the kind referred to by the last speaker. Ninety-nine out of a hundred of them haven't got money enough to get out of town. What are you going to do about it? I say do the work the best you can.

Phœbe J. B. Waite, M.D.: I have enjoyed the paper most heartily. I am frequently in the habit of passing down the bay in New York and observing Liberty enlightening the world—a beautiful statue, to be sure—and I admire the application made in the paper. However much I may admire surgery, I would make the plea for medical treatment in gynæcological practice. The surgeon has come to be prominent in gynæcological practice, and surgeons and physicians are too fond of using the knife. I have seen too many young women who have passed under the surgeon's knife, from whom the ovaries have been removed, single women and married women, who, in my opinion, might have been spared this infliction, because it is a very great infliction. I have in mind a beautiful young wife who came to me about nine months ago in a very despondent frame of mind, very much distressed over a diagnosis which had been made in her case, and had been told there was no help for her except in the removal of the ovaries. Said I: "You are a stranger to me, but if you were my daughter I would as soon you had your head cut off as to have your ovaries removed." She consented to give up the operation and placed herself in my hands. She had been told that she could have no more children, and she was very anxious to become a mother. I took the case, and three months ago she came to me looking bright and happy, and informed me that she was three months pregnant. So much for taking hold of a case medically.

I have also in my mind a young unmarried woman who suffered from dysmenorrhœa, and she passed under this skilled surgeon's hands; the ovaries were removed, and she did not get better. She

grew worse, and to-day she is hopelessly insane. I believe she might have been cured if the Homœopathic remedies had been carefully studied in her case.

While, as I say, I have great respect for surgery, I have still greater respect for medical treatment.

MARTHA J. RIPLEY, M.D.: I wish to emphasize the remarks made by the last speaker. While agreeing with the very able paper in cases of dire necessity, I should not be true to my convictions as a physician and as a woman if I did not say call a halt on your operations upon women. It is high time that you did so, because to-day many a woman is being operated on in all of our large cities, and in some of our small ones, who needs no operation at all. I could recall case after case of women who are to-day in insane asylums. My dearest friend went to her grave a week ago from an operation by a skilled gynæcologist. Those operations are needed, but beware how you practice them upon women who do not need them. Practice and study your Materia Medica. It is well that some of you do live in small towns where you cannot get skilled surgeons, or I fear there would be very few of your women patients left.

Now, I am looking in the faces of young men who come here and listen to the words of the older surgeons, and I recall what a student of my own said. He came to me and said he was going to perform what I considered quite a difficult operation on a lady. I said to him, "Do you think you are able to do that; are you skillful enough?" He said, "Well, I have got to learn some time, why shouldn't I begin now?" If you have got to learn upon women, go where those who are your teachers can teach you.

You understand that I believe there are operations that are needed, and when needed they should be promptly done, and you that have patients that are beyond your skill send them to those that you think can do better; but I call a halt upon operations upon women that are being done to-day. Turn to your own sex and see if they don't need it, too.

ALONZO BOOTHBY, M.D.: I did not propose to say anything upon Dr. Walton's paper, but it has been criticized in such a spirit that I feel called upon to say a word. I do not believe that my brother Walton intended in any way to convey the idea that unnecessary and improper operations should be made. It is not the skilled surgeon nor the skilled gynæcologist that operates when he ought not to. It is in those cases where there is a diseased ovary or a diseased tube that is beyond curative measures. You know it as well as I do. Every physician that has ever opened the abdominal cavity knows it, and when you come to the statistics there is not ten per cent. of fatalities. I would speak very modestly for myself, and say that if three cases that were operated on before I came here shall recover, it will make 102 (in the Homœopathic hospital and my own

institution) successful cases, and that includes 12 or 15 hysterectomies and 6 cases of appendicitis, and the various other cases that come up. When we can do this and have these results it is entirely out of place to assume that we are removing a woman's ovaries when we would not do the same thing to a man.

H. W. Roby, M.D., of Topeka: In all medical conventions that I have ever attended I have heard similar discussions to this, and I believe their necessity grows out of the fact that some minds are organized in one direction and some in another. Some men and some women in the practice of medicine give their time and their study and thought along the lines of Materia Medica and therapeutics; others, of surgery, gynæcology, and so on, and each become enthusiastic in their line and in their specialities, and very often overlook the powers and capacities of the other field of practice.

The thing that we need is, to know so much about surgical capacity, and medical capacity, and therapeutic capacity that we shall be able to make a wise and just discrimination, and use medicines where medicines are efficient, and where they are inefficient to resort to that which is efficient. I have seen, and you have seen many a time, patients subjected to medical treatment day after day, week after week, and month after month, through long and weary years, without result, who, if they had been handed over to a skillful surgeon, a slight operation might have set him on the pedestal of life and happiness. I plead here for a just discrimination between medical and surgical cases. They are both useful in their place.

Homœopathy has a grand field in which it may be successful, but outside of that field there are other possibilities, other capacities, and other powers. If you have given time and attention to medical practice do not be too sure that that is all there is within our command for the relief of suffering humanity.

The Chairman: If that is all, I will call upon Dr. Walton to close the debate.

Dr. Walton: Consider it closed.

PLASTIC SURGERY OF THE VAGINA.

By W. E. Green, M.D., Little Rock, Ark.

There is, probably, no branch of surgery that requires more thought, ingenuity, and operative dexterity, than do the plastic operations for the restoration of the pelvic structures in women. A study of the anatomy, physiology, natural and acquired relation of parts, immediate and remote effects of injury and their reflex influences, is essential to a correct understanding of the subject. When the pelvic floor is weakened by a rupture of its supporting structures, the functions of all the pelvic organs are, more or less, disturbed, and, ultimately, the entire human organism may become affected.

The levator ani muscles form the floor of the pelvis. They are two broad, thin muscles, which have their origin, principally from the posterior aspect of the body and ramus of the pubes; posteriorly, from the inner surface of the spine of the ischium. They pass downwards, and unite in the middle line. The most posterior fibres are inserted into the sides of the coccygeal apex. The middle fibres, which form the bulk of the muscle, are inserted into the side of the rectum, blending with the sphincters.

The transverse perinæi arises from the inner side of the tuberosity of the ischium and is inserted into the sides of the sphincter vaginæ and levator ani. These, in conjunction with other less important muscles, and the fasciæ, make up the perineal body. The levator ani, which constitutes the bulk of the perinæum, supports the lower end of the rectum, the vagina, and the bladder. A rupture of these parts, such as often occurs during labor, disturbs the muscular equipoise of the region. The torn fibres separate, the transversus perinæi muscles, instead of holding the central raphe in a state of tension, pull open the vaginal orifice. The anus is drawn upwards and backwards, towards the coccyx. The fascia, having lost its attachments, allows the anterior rectal wall to pouch forward,

forming a rectocele, which drags the vaginal wall downward. The vaginal muscle which has its principal attachment to the recto-vaginal fascia, loses its tonicity, permits the cervix to fall forward, changing the position of the uterus, which becomes more or less prolapsed, dragging down the bladder, preventing its entire evacuation, which causes increased relaxation and stretching of tissue, cystocele. The bloodvessels having lost their support, a general venous stagnation, with its consequent engorgement of the pelvic viscera and discomfort, ensues.

The variety and complexity of vaginal and perineal tears is, indeed, surprising. It has always been my habit to make a careful inspection of the parts after every confinement, and, I believe that I have seen almost every form that could be produced. The orthodox central lesion is the most frequent, but not, by any means, the most injurious. Lateral internal vaginal ruptures, that are often made with the tip of the blade of the forcep when removing it, before the head is born, are among the most mischievous. I have seen these extend from near the cervix uteri to the vaginal orifice, the outside structures being intact, and so deep that the cellular fat protruded through the gap. A superficial observer would never have detected them. An infrequent tear, of which I have seen three, is where the vaginal outlet is torn away from its attachments, being pushed forward by the head; the mucous membrane gives way just within the orifice. The most extensive one, extended upward, on either side, almost to the urethra, and downward to the sphincter ani muscle, making a pocket-like chasm, in which the four fingers of the hand could be inserted. A small central laceration, through which the child's shoulder emerged, existed, yet the sphincter was not torn. Another most significant lesion that is often overlooked, is where the muscular structures of the perinæum are torn in two and the skin remains uninjured; these tears are often deep, form pockets for the retention of septic matter, do not unite but granulate, and form large cicatrices, and yield disastrous results to the pelvic viscera. A rare condition that I once repaired, was an oblique laceration, one and one-half inches long, that existed well forward near the urethra. It bled furiously, and was difficult to close. I have repeatedly seen a submucous separation of the perineal structure where the mucous membrane of the vagina and the skin on the outside remained intact.

The power to prevent many of the severe disasters to the general health that follow ruptures of the perinæum and vagina, lies with the accoucheur. It is his imperative duty to make a critical examination of the genitalia after every labor, and if he finds any form of rupture, it matters not how insignificant it may seem to him, it may in some remote way produce trouble; therefore, it should be repaired before he leaves his patient. This should be done in the most systematic and painstaking way. If necessary, an anæsthetic should be given. The genital tract and adjacent parts should be most carefully cleansed, and douched with an antiseptic lotion; the torn surfaces trimmed of all ragged and contused tissue, rendering the parts even and clean cut. The wound should then be closed with two sets of catgut sutures deep and superficial, coaptating like structures. Too much care cannot be exercised in doing the operation. If properly executed, the results are most satisfactory, and failure will rarely follow.

When a laceration has been sustained, and the evil consequences manifest themselves, the case then becomes one for the surgeon's consideration, and the question that confronts him is, how can a restoration be accomplished; how can the over-distended and everted vaginal tissue be replaced, and the proper support given to the pelvic viscera and bloodvessels? The relaxed tissue in front, that forms a cystocele, must be removed; the separated levator ani muscles must be brought together, the retracted pelvic fascia united so as to lift the posterior vaginal wall in contact with the anterior, obliterating the rectocele and closing the gaping vulva. When all this is successfully done, the normal support is returned to the pelvic viscera and bloodvessels, the stagnant capillary circulation is relieved, the hyperplasiac deposits absorbed, the hypertrophied organs reduced and a healthy function restored.

The operator who does not fully appreciate the requirements of each case, and deal with it according to its individual demands, but simply endeavors to restore an imaginary perinæum—a dam-like obstruction to the prolapsing structures—will meet with disappointment in almost every instance.

The time allotted to read a paper does not admit of my taking up the entire list of plastic operations upon the vulva and vagina; therefore I shall only attempt to deal with three, viz., Removal of scars, cystocele and perineal injuries.

It is an established truth with all close observers who treat diseases of women, that cicatrices of the vagina produce both local and reflex irritation, disorder the nervous system, and thereby, more or less, impair the entire bodily nutrition; and I will say here, for the benefit of those who oppose an immediate repair of vaginal and perineal lacerations, that it is bad surgery to leave any wound of those parts, whether it occurs during parturition or from other causes, to heal by granulation. For aside from the ultimate injury that the pelvic viscera sustains, these reflex troubles may arise, and will yield to no treatment excepting the removal of the scar. Considering the above facts, amputation of the uterine cervix or operations about the vagina ought not to be performed with either the ecraseur or the galvano-cautery. The knife or the scissors should be used, and the denuded surfaces covered with mucous membrane.

These scars of the vagina demand serious attention at the hands of the surgeon; they should be managed with the same care accorded laceration of the cervix. All tender or contracting cicatrices should be dissected away and the resulting wound closed with sutures. Remnants of a lacerated hymen and thickened and sensitive nymphæ should be excised, excrescences about the meatus clipped away, adhesions of the clitoris broken up, and, if necessary, a V-shaped piece cut from its hood.

Cystocele.—A cystocele is a pouching deformity of the anterior vaginal wall, caused by a laceration or an over-distension of the structures. It contains the base of the bladder, and is gradually increased by the frequent straining at micturition—an ineffectual effort to evacuate the urine that constantly remains therein. The constant irritation increases the vascularity and causes a thickening of the walls. The condition is one that entails great suffering and is often overlooked by operators. Like other conditions about the vagina that demand repair, many devices—some of them extremely complicated—have been instituted for its correction. Its successful management is simple enough if the requirements are fully understood. The object sought is to change the convex to a plain surface; take all the slack out of the anterior vaginal wall, but not shorten it to any great degree. No stereotyped or set rules can be laid down to govern beforehand the amount of tissue to be removed or to designate the shape of the denuded surface.

Before beginning any of the operations for the repair of the vagi-

nal or perineal structures, it is proper to dilate and curette the uterus, if necessary, and repair any laceration of the cervix that may exist. If the cervix be badly diseased, as it often is in old subjects, an amputation is demanded. All the required operations may be done at one sitting or divided into two, as the necessity of the case may demand. It has generally been my habit to do the operations upon the womb and anterior vaginal wall first, leaving the rectum and perinæum for a subsequent time, before the patient leaves her bed.

With the patient anæsthetized and in the lithotomy position, with the parts in an aseptic condition, the surgeon takes a sharp tenaculum in either hand, hooks them in the mucous membrane on either side of the cystocele, and draws the tissues to the centre until all the slack has been taken up. In this way he estimates the amount of tissue to be removed, and, in his mind, outlines the shape and extent of his incision. It is often the case that a urethrocele coexists, when it will be necessary to carry the dissection well up to the meatus. At times the broadest area may be near the os uteri. After making out the area to be denuded, as before described, the vaginal wall is seized in its central line by one or two pairs of T-forceps which are held and drawn forward by an assistant. Then with a sharp scalpel, beginning down at the os uteri, an incision, that extends through the vaginal muscle, is carried forward on one side, along the line of election, to near the meatus; another one, in like manner, is made on the opposite side. Then with a few strokes of the knife, the loose cellular tissue which connects the vaginal muscle with the bladder is divided and the flap removed. Any irregularity or unevenness of surface may then be cut away with a pair of sharp scissors. The bladder is then evacuated with a catheter, the parts irrigated with hot water, to control the oozing, and the sutures introduced. This should be accomplished with medium-sized catgut, introduced in two rows, deep and superficial. Beginning at the cervical end of the wound, the needle is introduced just within the cut surface, so as not to include the mucous membrane, and made to pass straight through, across and emerging in the opposite side a like distance inside the cut surface. A continuous, or running, stitch is carried in this way up to the meatus, and the end left long. Commencing at the same point, another row of sutures, that take a strong hold in the mucous membrane, is introduced; the two ends that emerge at the meatus are tied. This closely unites the divided edges of the

mucous membrane and makes a strong seam, and is a successful measure. The posterior vaginal wall is then treated according to the demands of the case.

Various changes follow lacerations in the pelvic floor, depending upon the amount of injury done; therefore, a satisfactory management of the condition depends upon a restoration of the natural anatomical relation of the parts. This cannot be done by a superficial denudation of the mucous membrane. The mucous membrane and submucous tissue down to the muscular structures must be dissected up and all scar tissue removed (scar tissue is wanting in vascularity and does not unite well), like tissue brought together and the normal contour restored. To accomplish this established operations will not answer; every case must be a law unto itself, and the individual requirements must guide the surgical procedure. I can probably give a clear idea of my views by dividing perineal operations into three classes. 1. Where the tear is of moderate extent and not extending far up into the vagina. 2. Where the tear is deep, extends well up into the vagina, and a resulting rectocele exists. 3. Where the sphincter-ani muscle is involved—a complete laceration.

The operation for the first condition is simple and easy of execution. The sphincter-ani muscle having been stretched and the lower bowel evacuated and thoroughly douched, the labia is seized at its muco-cutaneous junction on either side, with a pair of T-forceps, just anterior to the point to which we intend to carry the dissection. These are handed to an assistant, who puts the parts upon the stretch laterally. One or two fingers are then introduced into the rectum as a guide, while a sharp scalpel in the right hand is entered flatwise at the raphe and pushed inwards toward the os uteri, beneath the vaginal tissue to the point that it is desired to carry the dissection, the highest point of the tear. With a sawing motion the flap is loosened up on either side; then, with the scissors, a pear-shaped piece is cut out of the flap. With a curved needle, threaded with medium-sized catgut, beginning above, two or three deep sutures are taken at right angles with the vaginal axis, the last one lying just inside of the vaginal outlet, drawn moderately tight, securely tied, and cut short. Then, beginning at the highest point in the vagina, a superficial row of sutures is applied, which coaptates the mucous membrane in the vagina and the skin on the outside; the parts

dusted with iodoform and a strip of iodoform gauze, for protection and drainage, applied. This is removed at the expiration of the fifth or sixth day, and a vaginal douche used every twelve hours.

This gives a most satisfactory result. The process of healing is comparatively free from pain; there is no cutting of stitches, swelling and distortion of parts, and consequent cicatrices and unevenness of surface as in the older methods, and if the operation has been dexterously done, the parts present an appearance that is not distinguishable from the natural condition.

When a rectocele exists, the preceding operation is somewhat modified. The dissection is carried much higher, the recto-vaginal septum is divided well up toward the uterine cervix, but the flap is only cut away as high as the internal perineal border. Beginning at the highest point at which the recto-vaginal septum was separated, a needle, threaded with a medium-sized catgut, is entered on the left side and made to penetrate the flap, carried across the space, and brought out in the vagina on the right side; re-entered one-third of an inch nearer the vaginal outlet, again passed across the space, and brought out in the vagina at a like distance (one-third of an inch) from the first point of introduction. One or two of these sutures (as may be necessary) are introduced, then tied in the vagina, bringing together laterally the cut surfaces, making a heavy ridge in the vaginal floor, taking up all the slack tissue. The outer part of the wound, from which the flap has been cut away, is then closed as in the previous operation. This procedure not only eradicates the rectocele, but gives an additional posterior support.

When complete laceration of the perinæum exists, greater complexities follow. The torn muscular fibres contract and atrophy from non-use; the severed ends of the sphincter muscle separate and retract; there is a thinning and stretching of the recto-vaginal wall, relaxation and sagging of the vagina, and, at times, prolapsus of the rectum. All these conditions must be considered and corrected. The operative measure adopted must be one that will establish the normal relation of the severed parts, support the pelvic viscera, relieve the over-distended circulation, and restore the functional activity of the sphincter-ani muscle.

From the many different methods in vogue for the repair of a complete laceration, and from the fact that I have known patients who have been operated upon two or three, and even four, times without

successful issue, leads me to think that perfection in method is yet to be desired. In fact, even in partial ruptures, I have on several occasions been called upon to do the work again where other reputable surgeons had failed in their efforts. Indeed, my successes in this line have been very flattering. I have the record of over one hundred consecutive cases without a single failure.

For the restoration of the perinæum in complete laceration, I have devised the following method, which, in my experience, meets all the requirements better than any other. I have now performed it many times with complete success in every instance. The healthy bowel brought down, protects the wound from infection and obviates the necessity of rectal flaps and bringing stitches into the gut, with its attendant dangers of rectal fistula.

First rendering tense the recto-vaginal septum with two pairs of T-forceps in the hands of assistants, an incision is carried along the line of junction of the rectal and vaginal structures, and then upwards on either side to the highest point of the tear, splitting the recto-vaginal septum and dividing the skin from the vaginal mucous membrane, after which an anterior vaginal flap is dissected up to the desired extent. The first step of the American operation is then done, viz.: the mucous membrane of the gut is seized on a line with the upper border of the internal sphincter, drawn down and divided all round by a circular incision, dissected down and removed at the muco-cutaneous junction. The ends of the torn sphincter are next loosened up and secured with medium-sized catgut, uniting them accurately. If there is much tension upon the parts, two or three heavy silk approximating ligatures should be introduced, taking a good hold on either side, as in an ordinary perineal operation. The deeper portions of the wound are then brought together with buried catgut, so as to leave no gaping spaces. The silk ligatures tightened and tied, the flap trimmed up and the necessary coaptating catgut sutures applied. The gut is then grasped with forceps, drawn down, and united all round to the skin, completing the American operation.

Discussion.

Moses T. Runnels, M.D.: Believing that all gynæcologists agree about the anatomy of the vagina and floor of the pelvis, I need not discuss the part of Dr. Green's excellent paper relating to that subject. Nor have I the time to review the different kinds of lesions of

the vagina and perinæum. The character and extent of these lesions are not overstated in the paper. I have seen the different kinds mentioned, and have had much to do with their repair. The discussion is limited to three plastic operations, viz.: removal of scars, cystocele and perineal injuries. The statement is made that it is bad surgery to leave any wound of the vagina and perinæum, whether it occurs during parturition or from other causes, to heal by granulation; that it is the imperative duty of the accoucheur to make a critical examination of the genitalia after every labor, and if he finds any form of rupture, it should be repaired before he leaves his patient.

I grant that a thorough examination of the patient's genital organs should be made immediately after each labor, but I do not believe that a surgical operation must necessarily follow labor immediately in a case of lacèration of the cervix, vagina or perinæum, one or all. In the majority of cases I hold that it is bad surgery to operate on distended and ecchymosed tissues which must undergo physiological involution; that in a case of extensive laceration of the perinæum, the soft parts have been traumatized and predisposed to infection which a surgical operation does not hinder but rather invites; that the superficial and not the deep structures of the perineal body are united by immediate perineorrhaphy, provided that union of the parts takes place at all; and that, as a rule, the delayed operation in a case of laceration of the cervix or perinæum requiring surgical interference affords the best results.

I have examined a good many women, from one month to several years after they had undergone the immediate operation, by different obstetricians for lacerations of the perinæum extending down to or through the sphincter-ani muscle, and I must acknowledge that I have not met with a perfectly restored perinæum in the entire number. I am convinced that the obstetrician who invariably resorts to immediate perineorrhaphy not only deceives himself but misleads his patient into the belief that she has a good perineal body.

Let nature and good treatment do what they may towards restoring tears of the vagina and perinæum, and wait until after the eighth week from labor to make a thorough operation on the lacerated part under aseptic and favorable conditions. Removal of scars at that time will be a trivial matter in comparison to the long list of evils following the delusion of a restored perineal body by immediate perineorrhaphy.

Deep ruptures of the cervix, with complicating metritis, accompany ruptures of the perinæum as a usual thing, and under these circumstances the vagina remains in a state of subinvolution, and cystocele and uterine prolapse are frequently observed. The anterior vaginal wall is more easily displaced than the posterior. In multiparæ, a small cystocele is often seen, especially when the bladder is full. It is not a pathological phenomenon, but is due to the subinvoluted and thickened vaginal wall. When the perinæum is defi-

cient in tone, a vesical hernia is liable to occur, as the posterior wall of the bladder is adherent to the anterior wall of the vagina and is carried down with it. The posterior wall of the vagina is only loosely connected to the intestinal wall, and therefore rectocele occurs less frequently than cystocele. The uterus is soon affected by the constant dragging of a prolapsed vagina upon its attachments, and thus occurs uterine prolapse and hypertrophic elongation of the cervix. I commend the operation for cystocele which Dr. Green has described.

Stolz makes a somewhat different suture in anterior colporrhaphy. "After freshening an oval surface to correspond with the cystocele, two curved needles are threaded on a silk suture, one needle at each end, and beginning near the cervix, the suture is passed in and out of the whole circumference of the wound about half an inch from the edge, something like the drawstrings of a tobacco pouch. The denuded surface is pushed inward toward the bladder, and the ends of the silk closely drawn and tied."

However, I prefer the continuous suture in layers. I agree with Dr. Green that operations about the cervix or vagina should be performed with the knife or the scissors and not with either the ecraseur or galvano-cautery, and that denuded surfaces should be covered with mucous membrane. I approve of Dr. Green's method of operating for incomplete laceration of the perinæum. I would advise that the rectum be first tamponed with cotton, sponge or iodoform gauze covered with vaseline and furnished with a thread; the posterior vaginal wall is pushed forward by the tampon and displayed to a better advantage.

This operation for incomplete laceration of the perinæum is a modification of Tait's method, which is much employed. Martin recommends juniper catgut and a continuous suture on superposed planes instead of silver sutures at separate points. The removal with the scissors of "a pear-shaped piece" from the flaps, as recommended by Dr. Green, takes out the slack and cicatricial tissue from the mucous membrane and prevents a puckered and pocketed vaginal lining in the completed operation. In this respect the operation is similar to Emmet's, which leaves but little scar tissue. The operation described can be done more quickly than the tedious operation of Emmet, and when well done accomplishes the same purpose.

Many procednres have been brought forward for complete laceration of the perinæum, but I am convinced that the operation described by Dr. Green is the best of all. Good results have been obtained by the Simon-Hegar, the Freund, the Hildebrandt, the Martin, the Emmet, the Tait, the Simpson, and other methods, but the great objection to each of these operations is that the women whose perinei have been operated upon by these methods and have the appearance of being perfectly restored, are very liable to complain that they have

no power of retaining the gaseous and liquid contents of the intestine. Whenever this complaint is made the operator will know that he failed to get a good union of the deep muscular planes and the divided ends of the sphincter-ani muscle. Again, the union may be complete superficially, but "a cavity may be left more deeply, with a resulting recto-vaginal fistula." Since more care has been taken to pass the sutures through the perinæum entirely, so as to bring the deeper parts in apposition, the recto-vaginal fistula has not been so frequent, but in the modified operation of Dr. Green this accident is guarded against in a very successful way.

According to his method, "the ends of the torn sphincter are loosened up and secured with medium-sized catgut and two or three heavy silk approximating ligatures, taking a good hold on either side to relieve the tension on the parts." This procedure, combined with the American operation, more nearly meets the objections that I have mentioned than is done by any other operation, and is the most simple. The danger of sepsis is reduced to the minimum, as the admission of any discharge from either the vagina or rectum is prevented by the closed incision.

Even in the cases that involve a laceration extending up the recto-vaginal septum more than an inch and a half, the American operation goes far toward simplifying the perineorrhaphy and rendering the result more successful.

L. C. Grosvenor, M.D.: In one point the paper and the first disputant upon the paper take diametrically opposite positions, the one arguing for immediate repair of the perinæum and the other criticizing that operation and stating his reason therefor. I have but few thoughts to give you after considerable experience in this matter. The first is to call your attention to the irritable and hurtful results of cicatrices which heal, in which there are hard tissues and fibres, and the immediate operation prevents all cicatrices if the operation is successful.

The other thought I wish to call your attention to is this: that raw surfaces are points of sepsis, and when a torn perinæum is immediately coapted, and well coapted and well cared for after the operation, there is removed from the case a danger of sepsis.

T. L. McDonald, M.D.: I want to add just a word in commendation of the paper by Dr. Green, and not altogether in condemnation of the statements of Dr. Runnels. I want to commend the ingenuity of a man who can devise such a plan of operation as Dr. Green has. I know it is excellent, and it is the best one I know of. I have tried it. There are, however, some cases in which, like all good operations, it will not apply. All of us who do any work on the bowels, and most of us do, find occasionally bowels where there have been excessive and extensive syphilitic ulcers. In such cases the bowel, perhaps for inches, has been destroyed, and you have, in-

stead of a healthy tube, such a condition that it is impossible to bring down the bowel. In such cases as that I do not think even Dr. Green himself would apply this operation. I have tried it, however, in the better class of cases, and I know it works well.

I would differ from Dr. Green just a little with respect to his first division or classification of tears in the perinæum. It may not be any improvement. I scarcely think it is. Instead of cutting out the mucous membrane in the smaller form of tear, I would do Tait's perinæum operation; that is, slitting it up and converting a transverse incision into a longitudinal and leaving the mucous membrane right open; not cutting it out, but leaving it there. You are bound to have union by first intention, as far as my experience goes, because you have no possibility of secretion falling into it.

While here I want to add a word in favor of the primary operation for laceration of the perinæum. You know the rule is here, as everywhere else in surgery, to close the wound, if possible, and obtain primary union. The reasons have well been given already. If done promptly, the results are justifiable. I know there are men here who have operated a hundred times to my one, and are competent to operate much better; but so far as I am concerned, I have never seen a failure after the primary operation. I saw one partial failure where I was not able to take the after-treatment myself, and it might have happened if I had been.

Martha G. Ripley, M.D.: I only wish to say that having spoken against operations, I do not wish to be thought entirely opposed to them. I believe in the primary operation, and with a large obstetrical practice, I must have some cases that need operation. The primary operation is the best one, in my opinion, and I am surprised to hear that somebody's opinion is there was never a successful case seen yet. If my patients were here, I think there would be successful cases seen.

As to the new idea that has recently been promulgated in the medical magazines in regard to primary operations upon the cervix, I should not feel justified in performing one with my present knowledge, with the parts in the condition that they must be after parturition. I hardly believe it would be the thing. But the primary perineal operation is the one that I have done, and done immediately.

J. W. Streeter, M.D., of Chicago: I would not say a word this afternoon on this subject or any other, were it not that I believe that it is quite an important one, and that, so far as it is possible for us, we should settle it in our own minds and be consistent at least. It seems to me that we are too far advanced in surgical knowledge, in pathological knowledge, in our ideas of sepsis and antisepsis, to revert to the old method of allowing nature to do the work which art can do a great deal better. The perinæum should be sewn at once when it is torn. There is hardly an exception.

I once used a common needle and linen thread when I was too far away from silk and suitable instruments, and it was not a success. In every other instance in my experience—which has not been a very limited one—the primary operation has been successful. If successful, why not do it every time?

The laceration of the cervix, the primary repair of which is done in some of the German hospitals, is a surgical exploit, and that is all there is of it. Nine-tenths of lacerations of the cervix will repair themselves so that the gynæcologists will never find them. I can imagine a case now and then where it would be wise to take a few stitches; but ordinarily, as I said before, it is a surgical exploit which will never become general in private practice.

J. C. Wood, M.D., of Ann Arbor: As to a perineal operation or an operation on the pelvic floor, I experimented for some time with the flap-split operation, and was delighted with it so far as restoring the perinæum was concerned. I found out, however, by experience, that in those cases where there was decided relaxation of the pelvic floor, with rectocele, that it did not fulfil the indications, so that by degrees I simply extended the flap-split until I separated the tissues to the crest of the rectocele, even if the crest was near the cervix uteri. Then, instead of dissecting out the tissue, I found, by experiment, that if the tissues were brought together underneath the superior flap, that it accomplished the desired end, that it gave us a posterior pillar, which, instead of being in the way, was a most valuable supporting medium. If the perinæum is to be restored, I make my outside incisions exactly as in the Tait flap-split method. If it is simply to overcome the relaxation of the pelvic floor, I make my incision high up, simply underneath the vaginal mucous membrane, make my dissection with the finger, and the whole thing can be done in two or three minutes, and bring the underlying surfaces together with a continuous catgut suture passed through the vaginal mucous membrane, the sutures being entirely passed through the vagina. The result, I think, will be surprising to those of you who will experiment with this operation.

Dr. Green closed the discussion as follows:

There has been so much said upon the subject of immediate repair of laceration, that it is hardly worth while for me to reply; but, it is a subject to which we cannot give too much emphasis, and it is useless for a man to put his theories against another's experience; and when I hear a man condemning the immediate repair of a lacerated perinæum, I have but one thought in my mind, and that is, that he is theoretical and not practical. When a man says he has repeatedly examined cases that have been operated upon and were faulty in their results, I must say it has not been properly done. I have seldom seen a failure, and I have been doing this ever since I commenced the practice of medicine. In my earlier operations it

was not well done, and I failed, probably, in 40 per cent. of my cases; but, after studying over the causes of these failures, they disappeared.

In regard to the rupture of the cervix, I believe the writer states that a rupture of the cervix often occurs at the same time, and why not repair it as well? I say, why not repair it as well? I do repair it as well. Whenever I am called upon to operate upon a lacerated perinæum, I always examine the cervix, and if the cervix has been lacerated I draw it down and repair it at the same time. We cannot neglect any of those things that will benefit a patient who is under our care.

In regard to the draw-string operation, I have operated a number of times with that. It is imperfect, does not give good results, and the reason is, principally, that it shortens the anterior vaginal wall and destroys the parts that we attempt to restore.

I have also performed Tait's operation a number of times, and I find that faulty. The fault is in not removing the flap. A portion of the flap protruding into the vagina causes more or less deformity, and I have found better results by removing the flap than when I left it. Why should not the flap be removed? You have got to dissect these structures down to the muscular tissue. If you simply denude a part, you will not get strong union. That structure is cicatricial. It is devoid of circulation, and why not remove it? How do you know that a nerve fibre may not be pinched in that scar? If you know anything about orificial surgery, you know it may, and you know it is bad surgery to leave a scar tissue anywhere.

In respect to the subinvolution of the vagina, etc., the Doctor is wrong in his anatomy. The parts have been over-distended. The bloodvessels have lost their support. There has been exudation of matter there that has become organized, the parts are thickened, and the whole thing is the result of the want of support which has been taken from the vagina.

In regard to the suggestion made by Dr. McDonald I accept that.

The following question was asked of Dr. Green:

"How many hours may elapse before it is too late to sew up the perinæum after labor?"

Dr. Green: That depends very much upon the acoucheur. If the man is one who is given to antiseptic methods, the operation may be delayed for several hours; but, ordinarily, if it is not done at once, if several hours elapse, the tissues become swollen, and probably have become infected, and it will not do to sew the perinæum up after the lapse of ten or twelve hours, as he is liable to have failure.

The Chairman: There is a little confusion in regard to the primary operation upon the cervix. Do you wish the Congress to understand that you operate upon a torn cervix at the time, or, were

you referring to a secondary operation? Do you repair the perinæum and also the cervix at the time of the accident?

Dr. Green: When I am called upon to repair a lacerated perinæum, an immediate repair I mean, I always examine the cervix, and if I find a lacerated cervix and it is my judgment that that can be mended at the time, it is my habit to sew it there and then. Sometimes it will not unite, but often it does. Where the labor has been perfected, and where the parts are greatly bruised and ecchymosed, it is probably not necessary to do it, as it will not unite; but, in my experience, a reasonable number of cases will unite, and save the patient a secondary operation for laceration of the cervix.

CÆSARIAN SECTION.

By H. F. Biggar, M.D., Cleveland, O.

Historical and Statistical.

Leishman says that Cæsarian section with its perfection in detail of operation and splendid results is of modern date. It is true that it has a history dating back to Numa Pompelius who "forbade the burial of pregnant women in whom the operation had not been performed." We have no early authentic statement that Cæsarian section was performed upon living women. Though no mention is made of it by the old writers, such as Hippocrates and others, yet its great antiquity is admitted. The first mention of Cæsarian section is in the *Chirurgia Guidonis de Cauliaco*, published in the middle of the fourteenth century, and here only after the death of the mother. It was performed the first time on a living woman in 1500 by Jacques Nufu on his own wife. At first no attempt was made to close the uterine wound, for all of the attention seems to have been given to the manner of closing that of the abdomen. In 1769, Libas was the first to close the uterus with sutures after the operation, but this proceeding was lost sight of until 1828, when it was carried out by Dr. Frank E. Pollen, who first used the silver wire suture for the uterine wound.

Sir F. Gould, in 1742, is the first British author who notices the operation and says it may be performed "either while the mother is living or after her death."

The Cæsarian operation meant one of three different proceedings, viz.:

First.—Cutting the os when hard fibrinous deposits are found around it, or when other conditions exist which necessitate its opening and enlargement; this is vaginal Cæsarian section.

Second.—Abdominal Cæsarian section for the removal of the fœtus from the abdominal cavity, or *ectopic gestation.*

Third.—Cæsarian section where the incision is made through the abdominal and uterine walls for the extraction of the fœtus.

In abdominal section there are three conditions which indicate the operation, viz.:

First.—When the fœtus is alive and the mother died in labor, or in the last two or three months of pregnancy.

Second.—Where the fœtus is dead but cannot be delivered in the usual way on account of the deformity of the mother or the disproportionate size of the child.

Third.—When both the mother and child are living, but delivery cannot take place from the same cause as in the *second* example.

History records the bitter opposition to the operation as well as the strenuous efforts made to support it during the seventeenth and nineteenth centuries. To-day it is an accepted operation under existing conditions with results favorable.

The conditions which warrant the operation are largely disputed. In Germany it is asserted that where the conjugate diameter of the brim is only $2\frac{1}{2}$ inches. Americans say that craniotomy can be performed where the diameter is only $1\frac{1}{2}$ inches, but the conjugate is *not* the *test.*

Cazeau thinks the operation is indicated when the pelvic contraction measures five centimetres (two inches), and Tarnier is of the same opinion. DePaul prefers the Cæsarian section when the pelvic contraction is only six centimetres and the child is alive.

Scanzoni would even prefer the operation for a living child if the contraction was only eight centimetres. This diameter may be from $1\frac{1}{2}$ to $2\frac{1}{2}$ inches and other conditions exist which demand the procedure. These conditions may be a shelving brim, an exostosis, a fibroma, pelvic hæmatocele, cellulitis, malignant neoplasms, fracture of the pelvic bones, spondylolisthesis, placenta prævia, the kyphotic pelvis, the scolio-rachitic pelvis, the Roberts pelvis, the osteo-malacia pelvis, or the ruptured uterus. Moreover, the operation is indicated in cases in which the mother *prefers* the operation rather than to sacrifice the life of the child; also in cases of death of the mother while the child is viable.

The following statistics by Schroeder up to 1874 gives the percentage of deaths at 54 per cent. Dr. Robert P. Harris gives the following statistics of operations: In North America, 135 cases with 60 cures; in England, 141 cases, 25 cures.

He further states that in 120 operations in this country the percentage of cures in the country was 62½ per cent.; in the small towns, 34 per cent., and in the cities 33 per cent. The same authority, in a report dated September, 1886, gives the results of Cæsarean section performed when the condition was favorable, viz.: saved, 75 per cent. of the mothers in this country and 80 per cent. of the children. It further gives a statistical report as follows:

Cæsarean operations of the United States,	144
Women saved, 37½ per cent.,	54
Children living when delivered,	64
First 50 operations saved, 54 per cent.,	27
Last 50 " " 24 per cent.,	12
Operations for decade ending Dec. 31, 1855,	25
Women saved, 48 per cent.,	12
Children living,	13
Operations for decade ending Dec. 31, 1865,	24
Women saved, 45⅝ per cent.,	11
Children living,	10
Operations for decade ending Dec. 31, 1875,	36
Women saved, 27⅞ per cent.,	10
Children living,	11
Operations for 10½ years, ending Aug. 1, 1886,	37
Women saved, 21⅔ per cent.	8
Children living,	16
Late operations, nearly 84 per cent. of this division,	31

The late Dr. S. S. Lungren, of Toledo, O., collected reports of all cases on the same woman. On 48 women the operation was performed 119 times; 8 mothers only have died and 40 have been saved.

"The time most favorable for the operation is that which just precedes or immediately follows the rupture of the membranes; for at this time the os is well dilated and the uterine contractions, which have already existed for some time, acquire a more regular and intense character. If one operates much earlier than this, the uterine contractions after the operation are apt to be insufficient, and if much later, the danger to the child is considerably increased."

Statistics vary; one report gives the advantages of an operation during or before the close of the first day of labor to be 73 per cent. of women and 86 per cent. of children, while Lusk says only 81 per cent. of women are saved.

Dr. Harris gives statistics as follows:

	Operations.	Cures.
24 hours before labor had commenced,	7	7
34 " " "	7	4
34 " after " "	10	1

Radfoot gives statistics of 100 cases as follows:

	Operations.	Cures.
24 hours before labor,	24	7
24 " after "	76	9

Kayser's statistics in relation to the rupture of the membranes is as follows:

	Mothers.		Children.	
	Cases.	Cures.	Cases.	Cures.
Before or 6 hours after,	39	20	39	34
7 to 24 "	35	24	32	25
More than 24 "	38	13	37	19

Of Porro's operation the results for the first few years were very unfavorable. It is reported that the mortality of mothers was 58 per cent. For the period of five years to the close of 1889, from all countries—the general result is of 158 operations—there were 47 deaths—a mortality of 29 per cent. Italy, who gave us the Porro operation, and has thus far led all countries in the number of her Porro-Cæsarean exsections, has made the least satisfactory progress in reducing the percentage of deaths.

Cæsarean operations in the United States where the obstruction was due to uterine fibroids,	13
Cæsarean operations in the United States where the obstruction was due to pelvic fibrous tumors,	1
Cæsarean operations in the United States where the obstruction was due to pelvic exostosis,	8
Women recovered in uterine fibroid cases,	4
" " pelvic "	0
" " " exostosis,	4
Children living in uterine fibroid cases,	5
" " pelvic "	1
" " " exostosis,	5
Time in labor in uterine fibroid cases, 42 hours to 15 days,	9
Time in saved cases: $9\frac{1}{2}$ hours, 14 hours, 3 days, 4 days, respectively,	4
Time not stated, but labor prolonged,	2
Time in labor in pelvic exostosis cases, 24 hours to 3 days,	6
Time in saved cases: "a few hours;" 12 hours, 24 hours and 38 hours, respectively,	4
Uterine fibroids, cases saved,	$30\frac{9}{13}$ per cent.
Pelvic exostosis, cases saved,	50 "

Modifications of the Operation.

1. Porro's Cæsarean section; ovaro-hysterectomy; amputation of the uterus and ovaries immediately after the performance of Cæsarean section, the stump being fastened at the lower angle of the abdominal wound.

2. Thomas's operation; laparo-elytrotomy.

3. Porro-Müller operation. In this the uterus is brought out of the abdominal incision, an elastic ligature is applied around the cervix at the level of the internal os, and the uterus is then incised and the fœtus extracted.

4. Porro-Veit operation. Modification of Porro's operation by dropping the stump into the pelvis.

5. Sänger's operation, sero-serous.

6. Pubeotomy.

Necessary Steps in the Operation.

First.—Care for the patient in every particular, as in cœliotomy.

Second.—The abdominal incision should be sufficiently long to permit the lifting of the womb out of the abdominal cavity.

Third.—Protect the exposed uterus with hot cloths.

Fourth.—Have a *heavy* rubber tubing passed around the cervix uteri, and tie in a single knot loosely; it may be useful in case of hæmorrhage.

Fifth.—Surround the lower part of the uterus with sterilized or medicated gauze, thus preventing soiling the abdomen.

Sixth.—Open the uterus and remove the child and placenta.

Seventh.—If severe hæmorrhage occurs, seize the uterus with the hands and, gently or otherwise, contract it. Ergot may be necessary; or, tighten the rubber tubing.

Eighth.—After cleaning the cavity of the uterus, close the uterine incision with sutures. Silver, silk, or catgut may be used, adopting one of two ways, viz.:

1. The deep suture, avoiding the mucosa, with superficial intervening suture. 2. The sym-peritoneal suture, or the sero-serous of Sänger.

Ninth.—Close the abdominal wound with silkworm-gut suture, after the manner of cœliotomy, and the usual antiseptic dressings.

Clinical Cases.

Case I.—Cæsarian section. Mother and child saved.

Mrs. A. Salter, a German, of Salineville, O., æt. 28, weight 65 pounds, height 4 feet; husband's height, 4 feet 9 inches. This is her fourth impregnation; in the three previous gestations the lives of the children were sacrificed at full term by craniotomy.

The parents were desirous of having a living child, and the mother was willing to assume the risk of a Cæsarian section.

Two weeks before the time of the completion of term Mrs. S. came to the Huron Street Hospital, in Cleveland, O. At the completion of her gestation, at 7 A.M., December 15, 1886, labor pains began and continued till 9 o'clock in the evening of the same day. Prof. J. C. Sanders was in constant consultation during the day and up to the time of the completion of the operation. Prof. Sanders, after his first careful examination of the patient, believed that by turning the fœtus in utero a living child could be born. At 9 at night, when the os was dilated to the size of a silver dollar, and before the membranes had ruptured, the doctor decided that it would be impossible to deliver the child alive *per vias naturales*—a wall of bone, the shelving brim of the pelvis, obstructing the passage, and the conjugate diameter being less than two inches. Anticipating his decision, every preparation was ready for the operation. The babe was living, and the heart-beats were 135 per minute. The London mixture was used, and in fifteen minutes after beginning the operation a living girl babe was extracted from the womb through the abdominal and uterine walls. The operation was performed in the operation-room of the hospital, before the senior class of the Homœopathic Hospital College and other physicians.

The Method of Operating.

The patient, assistants, nurses, instruments, dressings, room and furniture were all carefully prepared for the operation. None were admitted who had been dissecting or were in attendance on any contagious or suspicious cases within forty-eight hours. The usual cœliotomy incision was made, beginning two inches above the symphysis pubis and extending to a point beyond the umbilicus, and in depth down to the peritonæum. When the bleeding was stopped the peritonæum was opened, exposing the uterus. An assistant held the uterus in position by placing the hands on either side of the

womb. The sides of the peritonæum, coming in contact with the uterus, were packed with sterilized gauze, thus protecting the peritoneal cavity from the entrance of fluids. The uterus was entered by an incision, eight inches in length, in the medium line on the interior surface. Fortunately, the "placental site" was not in danger of being encroached upon by the knife, which brought to view the translucent membranes enclosing the fluids which cushion the babe in its casket like a bird in the egg. A natural contraction of the uterus, observable by all, ruptured the membranes; the fluid escaped when the infant, doubled upon itself, was exposed to view and the closest approach to the great mystery of life—the marvel of maternity—it is possible to have enjoyed was seen by those who reverently witnessed the operation. Some strong men actually wept in witness of the depth of emotion caused by what so few have ever seen and what no man could see without being profoundly moved—a sight as powerful to move the heart as the view that Moses had of Deity. Every other feeling was completely subordinated to that sentiment of reverence and wonder which would be natural on being permitted to see what is transpiring on another of the inhabited planets. The presentation was natural. The feet were seized and the babe lifted from the womb and given to Prof. J. C. Sanders and Dr. L. W. Sapp to care for. A gasp and a lusty squall, assuring us all of the safety of the babe, elicited a round of genuine but subdued applause and an exclamation of delight from the father. The cord was secured, after-birth and membranes were carefully removed, the uterus was grasped and made to contract. The patulous cœllum uteri did not need a drainage-tube. The cavum uteri was gently cleaned and the uterus closed with animal ligatures, after Sänger's method. The abdominal cavity was cleaned, the abdominal incision closed with silk sutures, the toilet of the abdomen completed, and the mother put to bed. After a few moments she recovered consciousness and found by her side a living girl babe. With motherly instinct she drew her child closely to her heart and greeted her darling with the exclamation, "Mein babe," a salutation that could but feebly express the depth of her mother's love and devotion to those who did not know the risk she had run to save the babe's life. The mother and babe were the recipients of devoted and sympathetic attention by the nurses of the hospital, and both returned to Salineville after the usual uneventful convalescence of a cœliotomy.

CASE II.—Cæsarian section.

Mrs. R. T., American, æt. 34, mother of two living children. From the beginning of her labor was assisted by a midwife for sixty hours. At this time Drs. J. C. and J. V. Winans, of Madison, O., were called, and the midwife retired from the case. The condition of the patient was so alarming that Dr. Winans immediately summoned Drs. A. L. Gardner and L. H. Tillotson, of Painesville, O. It was supposed that large doses of Ergot had been given by the midwife. I was summoned by telegraph and arrived at two in the morning, and found the patient in a state of collapse with suspected symptoms of a ruptured uterus and a non-viable child. Sectio Cæsaria was determined upon and performed by the light of a kerosene lamp. The uterus was found longitudinally ruptured at the lower third anteriorly, the amniotic fluid escaping into the abdominal cavity, but the membranes, placenta, and child were in utero. Perhaps from the weakened condition of the patient at the time of the rupture and the syncope following the escape of fluid into the abdominal cavity, all uterine contractions had ceased. No doubt, if the labor pains had been severe the contents of the uterus, or the greater part, would have been found in the abdominal cavity.

The operation was, in every way, similar to Case I., with this difference, that the rupture which was slightly to the right of the median uterine line, was enlarged; the torn edges were trimmed, and the uterus closed by two sets of animal sutures, the deep going to the mucosa, and the superficial approximating the peritoneal borders. The surroundings were unfavorable for successful operation—the woman was moribund, the 13-pound fœtus dead, and the nursing incompetent. The patient lived but a few hours.

CASE III.—*Porro's Operation.*—Mrs. W. N. K., a German, æt. 43, living in Akron, O., and mother of two living children. Dr. O. D. Childs had attended her in previous labors. No uterine examination had been made by Dr. Childs since the birth of her last child till the beginning of the third labor.

Upon examination, he found a very large intra-mural fibroma, situated at the junction of the neck with the body of the womb. Consultants were called, and every effort made to deliver by forceps, or by turning the child, or by changing the position of the woman, but no advancement was made. The membranes had ruptured 18 hours after labor set in. I was summoned by telegraph, and arrived

forty-eight hours after labor began. Dr. Childs says the child had been dead three days. The condition of the woman was not very good. I made every reasonable effort to deliver and failed. Could not get even an entrance to the womb, owing to the displacement of the os upwards and behind the symphysis tubes, as well as from the undilatable os from the fibrinous deposit. Porro's operation was performed, in all respects similar to Case I., with this difference, that after the babe and placenta were extracted, the neck of the womb was clamped with Keith's clamps, the uterus with the fibroma and adnexa were removed and the stump dressed, extra-peritoneal. The fibroma weighed 11½ pounds and the child 11 pounds.

On the tenth day after the operation there was profuse hæmorrhage of the stump, and before the physician arrived the woman was in a state of collapse and shortly died. If the patient had been in the hospital, the hæmorrhage might have been stopped. If the rubber ligature, since introduced, had then been used, the result might have been different.

Case IV.—Ectopic gestation, in many respects similar to Sectio Cæsaria. Miss H., an American sewing girl, æt. 22, a patient of Dr. I. F. Baughman, of Akron, O., after a railroad accident, first noticed a lump in the right ovarian region. Action was brought against the railroad company, who settled the claim without litigation. The tumor continued to grow. Fifteen months after the railroad accident, and seventeen months after the cessation of the menses, with the assistance of Drs. Baughman, O. D. Childs, J. W. Rockwell, Wm. Murdock, and R. B. Carter, cœliotomy was performed at the rooms of the patient. She refused to go to a hospital. The tumor, which filled the abdominal cavity, was adhered to the parietal peritonæum and abdominal viscera. The incision was in the median line of the abdomen. It required very careful dissection to avoid the intestines, which were closely adherent to the entire circumference of the uterus; the walls of the sac were thick and resembled uterine tissue. Within the cavity was a dead fœtus, which was removed from its placental nidus. The extensive adhesions of the cyst were not disturbed, but the edges were stitched to the abdominal opening; glass drainage-tubes were placed both in the abdominal and placental cavities. The child, a boy, weighed 18 pounds; the nails were so long that they curled around the fingers and toes. Its conception was seventeen months previous to the time of the

operation. The child was in a good state of preservation, but we were not able to elicit any information from the mother as to the exact time of the death of the child. The room, bedding, furniture, and surroundings, were very uninviting, in fact everything indicated a picture of squalor; notwithstanding all these conditions, the patient slowly recovered and subsequently married.

CASE V.—Sectio Cæsaria repeated on same woman. Mother and two children living. Mrs. A. Salter, same woman as reported in Case I., from Salineville, O., æt. 34, six years after the first Cæsarian section became pregnant, making in all her fifth impregnation. At the seventh month of gestation she came to Cleveland for consultation. With Professor J. C. Sanders as consultant, she was advised to return to her home, and in two weeks before the completion of the gestative period she was to enter the hospital and be prepared for the Cæsarian section. On February 16, 1893, at 3 P.M., two or three weeks before the expected time, while at her home at Salineville, labor began, and at 3 A.M., December 17th, they took a train for Cleveland. They came in a day-car, 75 miles, the pains lasting until her arrival at 7 A.M. By a mistake, I did not learn of her arrival on the morning train, and the consultation preceding operative measures occurred at 4.30 P.M.; at 5 P.M., twenty-six hours after the rupture of the membrane, I began the operation before the medical class of the college. The method was the same as the first Sectio Cæsaria, following the old line of incision. The old operation had resulted in the adhesion of the entire uterine length to the abdominal wall. The method of suturing the uterus was different owing to adhesions of the uterus to the parietal peritonæum; the deep sutures around the tissues included the abdominal and uterine walls down to the mucosa, and the superficial sutures merely the abdominal walls down to the peritonæum.

The length of time occupied was twenty-five minutes; the birth was "dry" in this case on account of the early rupture of the waters. The child weighed eight and one-quarter pounds. At the first operation the father positively objected to the removal of the ovaries. It was thought best not to do so at this time, not only on account of most intimate adhesions of the abdominal parietes to the uterus, but from the enfeebled condition of the mother resulting from labor having continued for thirty hours, and the uncomfortable journey to the hospital during a severe winter night. Prof. J. C. Sanders deter-

mined the fœtal heart-beat as 128, prognosticating a boy. The case made a good recovery, despite some bronchitic and erysipelatous symptoms, and returned home in the usual state of bodily vigor. The boy was christened as a point of remembrance of the method by which rescued, Cæsar, and was a thrifty, well-nourished child.

The doctors present, besides the college seniors, were Drs. J. C. Sanders, H. Pomeroy, J. K. Sanders, Martha A. Canfield, G. W. Meredith, H. D. Bishop, G. B. Haggart and Emily Barnes.

Suggestions.

Antiseptic thoroughness is essential in every detail, including the care of the abdomen and vagina.

Chloroform is preferable, especially with Junker's improved apparatus.

Ether in certain conditions may be safer. If possible, prevent vomiting, as it might open the uterine sutures. To prevent vomiting after an anæsthetic, have a good movement of the bowels.

Trendelenburg's position is not very desirable in sectio Cæsaria.

If the operation is at the election of the surgeon, the most suitable time is before the membranes are ruptured and when the os has dilated in size equal to a silver dollar.

Tait's method with a rubber cord around the cervix uteri to stop the hæmorrhage, and lifting the uterus outside of the abdomen to extract the child, are of great advantage.

If rubber cord is used, beware of secondary hæmorrhage. The incisions should be six or eight inches in length, beginning three inches above the pubes, and extending above the umbilicus.

In cutting through the abdominal wall, secure all bleeding vessels before incising the uterus.

If the uterus is not lifted out of the abdomen let the assistant press the abdominal walls on each side of the incision down against the uterus, thus retracting the wound edges and pressing the uterus still prominently into the wound opening.

Before lifting the uterus out, insert three or four long sutures of silk through the upper part of the incision, so that the abdomen may be temporarily closed before extracting the child.

Let the incision into the uterus correspond with the abdominal opening, but shorter.

Avoid entering the uterus through the placental site. If the pla-

centa should lie in the line of the incision (placenta prævia Cæsareana) run the fingers between it and the uterine wall, find its margin and break through the membranes there and grasp the feet and extract, as before.

Do not cut the placental tissue, thus bleeding the child in placenta prævia Cæsareana.

Deliver by the feet.

If the uterus is not lifted out of the abdomen before delivery of the child, it may be done afterwards for the purpose of inserting the stitches.

There are three dangers—shock, hæmorrrhage and sepsis. Hæmorrhage may be controlled by manual compression of the uterus or cervix uteri.

Sutures should be thoroughly antiseptic.

Don't use a continuous suture in the uterus.

If the contents of the uterus are septic, turn the uterus out of the abdomen before the delivery of the child.

The reason the uterus was not sutured in the early times was largely due to the persistent existing superstition with regard to the alternating contractions and relaxations of the uterus which forbade the employment of the uterine sutures. Even Porro at one time considered that the contraction of the uterus necessitated its entire removal. Now his operation has been restricted to within narrow limits.

Suturing the uterus largely adds to the good results.

Cæsarian section should be always, if possible, elective, not the *dernier ressort.* Per via naturales may not always be the best way. In mismanaged cases Porro's operation is preferable. Fœtal mortality is greater in this country, the hospital weight of infants being about seven and a half pounds; in private rooms in Europe the average is six ponnds.

Thanks to the great discovery of the source of the sepsis and of its preventive means, this "Opprobrium Chirugæ" has to-day assumed and is destined forever to maintain its place as one of the benign and most serviceable resources of art.

Cæsarean section will yield as good results as those now given by cœliotomies.

May we not consider this operation in placenta prævia totalis or even partialis? In placenta prævia vaginalis, if the os is rigid from fibrosis, the hæmorrhage profuse, the presentation lateral, the cord

prolapsed and not reducible, or the fœtus evidently suffering, immediate recourse to the Cæsarean section should be had.

If the cord was prolapsed, and, after reposition, still descended, the os being partly dilated and not dilatable—dangerous hæmorrhage continuing meanwhile—the Cæsarean section would be unquestionably indicated for the safety of both mother and child.

The perforation of the living child is not longer justifiable.

Where there is a viable child, is not Cæsarian section *preferable to craniotomy?*

Craniotomy and embryotomy are performed too often. It soon may become a lost art, or it will be relegated to its proper place as an operation on the dead fœtus to save the mother, and not to destroy the child.

Craniotomy is a more difficult operation than Cæsarean section.

Dr. Osborn, in the celebrated case of Elizabeth Sherwood, extracted a child through a pelvis measuring $\frac{3}{4}$ of an inch in the narrowest portion.

The precise limit at which the dangers of delivery through the pelvis rise to the level or exceed those from Cæsarean section is not easy to determine. It depends partly upon the size and ossification of the child's head, and largely upon the experience and dexterity of the operator.

The indications of premature labor in pelvic deformities may make the operation justifiable.

Michaelis extracted a small child through a pelvis measuring but $1\frac{1}{2}$ inches in the conjugate diameter.

From 1777 to 1849, 65 pubiotomies are recorded, saving 44 mothers (32.4 per cent. mortality) and 24 children (64 per cent. mortality). From 1868 to 1880, 50 operations, by three operators, saved 40 mothers and 41 children—a mortality of 20 per cent. and 18 per cent. respectively. From 1880 to 1886, Morisana had, out of 18 cases, only 10 recoveries. But with a perfected technique, and by practicing strict antisepsis, better results were obtained, and the last report by Caruso showed in 22 operations 22 recoveries and 20 living children.

From a late report of pubiotomy, in 44 cases all the mothers recovered but one, with a loss of 5 children.

Pubiotomy is on trial. The opinions of eminent specialists differ. Some cases have not resulted well. Schroeder, Fritsch, A. Martin

and Runge treat it with silent contempt. Kehrer, Zweifel and Winckel condemn. Kehrer writes that it always results in permanent invalidism.

Winckel says: "The good results expected from this operation have not been obtained, but lacerations of the bladder, injuries to the sacro-iliac joints and necrosis of the pubic bones have been plentiful."

Pubiotomy not admissible in Roberts's or Nagle pelvis.

The so-called Sänger's stitch is the best, but be it known to all men that our own Lungren even folded in the peritonæum so as to keep the peritoneal surfaces in contact. He not only did this, but described it in print several years before Sänger, so that everybody could read how he did it.

The Galbiatis knife for pubiotomy.

A ruptured uterus occurs once in 4000 cases. Hugenburger estimates the mortality from ruptured uterus at 95 per cent.; Carl Braun at 86 per cent.

Spaeth, writing before the conservative operation of Sänger had changed the results of practice, said that there had not been a single case in the lying-in hospital in Vienna during the century in which the mother had survived.

Baudon, writing in 1883, said: "In Paris there has been one successful case in eighty years, though in the present century the operation has been performed on as many as fifty women."

Leopold says: "The danger to the mother increases directly as the time since the rupture, and the forces used in attempting delivery, those factors leading to exhaustion from hæmorrhage or infection. The child dies very soon after the rupture. The mother may show considerable shock within a very short time, but quick assistance and successful control of the hæmorrhage can save the woman, and allow a favorable prognosis in the most severe tears, where the woman is seen at once.

Rupture of the uterus anteriorly at the vesico-uterine fold is more frequent than has been generally supposed. A rupture at this point does not necessarily produce severe hæmorrhage.

Dr. R. P. Harris reports nine women whose wombs had been ripped in advanced pregnancy by the horns of infuriated cattle, with the survival of four women and four children.

In another report of six cases of self-inflicted Cæsarian section, five of the women recovered.

In repeated operations, shall the incision be through the first? Not unless there are no adhesions.

If the urine must be drawn, have the vulva, particularly the vestibule and orifice of the urethra, antiseptic.

After Cæsarian section, would it not be well to ligate the Fallopian tubes for the future safety of the woman, and thus have no repetition of Cæsarian section?

To avoid post-partum uterine relaxation, operate early.

Vaginal drainage is not always necessary.

Consider well before operating upon a dead child.

The Jews, from very ancient times, practiced hysterotomy, now called Sectio Cæsaria.

The Greeks were acquainted with the operation of removing the child while the mother was alive, and named it hysterotomia.

The first case recorded with anything like circumstantial minuteness is that done by a sow gelder (Chatneur of Seigerheusen), who operated on his own wife.

Kehrer recommends that the uterus be opened at the level of the internal os by a transverse incision, thus avoiding the placenta and a gaping uterus.

Cohnstein recommended that the whole uterus should be turned out of the abdominal wound, and that the opening should be made on its posterior aspect while the aorta is being compressed. He says the uterine tissue is thickest behind, and therefore less likely to gape.

Do not use the utero-parietal suture.

Let an abdominal bandage be worn for months after cœliotomy.

Let the operation be thoroughly and quickly done.

To secure union or healing without pus is the highest attainment of a surgeon, and counts for more than the brilliant operation.

The operation may be brilliant and skilful, but success depends on the proper preparatory and subsequent care.

Cæsarian section is an easy operation.

Bibliography.

Cooper's Medical Dictionary.

Leishman's System of Midwifery.

Reference Hand-Book of the Medical Sciences.

Lusk's Science and Art of Midwifery.

The American Journal of Obstetrics and Diseases of Women and Children.

The British Gynæcological Journal.

Gynæcological Transactions.

Sänger—The Cæsarian in Cases of Uterine Fibromata; Criticisms, Studies, and Propositions for the Improvement of the Cæsarian Section.

Rousset—Traite Mouveau de Chysterotomotakie, ou Enfantement Cesarienne.

Medical Record.

North American Journal of Homœopathy.

Homœopathic Journal of Obstetrics, Gynæcology and Pædology.

Billings's National Medical Dictionary.

The Lancet.

The British Medical Journal.

Archiv. für Gynäk.

Centralbl. für Gynäk.

J. Greig Smith—Abdominal Surgery.

Herodotus.

Josephus.

Annual of the Universal Medical Sciences.

International Clinics.

The International Medical Annual.

Discussion.

The Chairman: The gentleman who was appointed to lead in the discussion of this paper is not present. The paper, therefore, will be in the hands of the Congress at once, and I hope we may have it discussed. I have the pleasure of introducing to you Dr. Streeter, who will open the discussion.

J. W. Streeter, M.D.: I don't mean this discussion to go by default. It is to me a very interesting paper. I was not prepared to discuss it *secundum artem,* but there are some points I desire to emphasize. I am delighted with the record made by our friend, and I think we all have a right to be proud of him. I was also glad to hear that my old friend from Toledo had done such good work in this direction. It seems to me that the Cæsarean section is growing, that the demand for it is growing, and the advisability of it is growing, and just in proportion as the doctors and the people become educated to what seems to be the wisest plan for women *in extremis,* just so soon will they submit to an early operation,

and it seems to me it is the early operation that is bound to be successful. Most of these cases which the doctor narrated were upon women *in extremis*; two of them were premeditated cases. I believe, as he says at the end of his remarks, Cæsarean section is an easy operation. It is an easy operation, but in a majority of cases it is done when the woman is so far exhausted, so extreme in her debility, that her chances are not at all good. The trouble is not in the operation, but in deferring to a time when the woman does not have a reasonable chance for her life. If we can educate ourselves and our patients to a belief that there is surgical aid in these extreme cases of pelvic deformity, that it is a reasonably safe remedy, just so soon have we done them and ourselves a very great service. It is only a few years since, if a case of Cæsarean section was performed in Europe, it was heralded all over the world; and if it was done in this country, Europe knew it by telegraph. Now it is done throughout the country and in the backwoods, and successfully done. It is a wonder, too, that it is done so successfully, because, as I said before, most of the women are half moribund before the operation is commenced. You would not by preference operate in that way. Discover these deformities, if you can, in time, and set the time to operate, and make it a premeditated case. Make every preparation for it, and it will be as simple and as satisfactory in its results as laparotomy. I am very much obliged to Dr. Biggar for his careful paper.

The Chairman: While waiting for another, I might interject a word with regard to a double Cæsarean section. This was performed on a woman, and she recovered. A silver suture was used in the uterus. The doctor told me all about this, so that I speak advisedly. He used the silver wire in the uterine wall, twisting it down and leaving it; and when he came to do his second operation on the same woman, three or four years later, he found the silver sutures there in a perfect state, bright and clean. The uterus had gone on in its expansion and the silver wire had not caused any trouble. He had to perform this second operation at the peril of his life—a drunken husband threatening to kill him if she died, and he determined then and there that he would never perform it on her again; so he did what was unknown at that time, and I haven't heard of it having been done anywhere since; he ligated the Fallopian tubes, and so stopped the business.

E. H. Pratt, M.D.: It has been a long time since I have delivered babies, but at one time I was doing it at quite a rapid rate. I never killed a child to save a mother. I have been called upon to deliver them after they have been killed—been called in counsel.

The valuable part of this paper to me lies in the suggestion of preventing craniotomy. It is very rare that we will ever come across that; that there ever occurs a case of rupture of the uterus

into the peritoneal cavity at confinement. I have never encountered one in my personal experience, nor have I ever come in contact with a medical gentleman that has reported such a case to me. They are in the books, and Dr. Biggar very kindly furnished us with illustrations of that class of cases, but they are so rare, and when they do occur the collapse is so extreme, that Cæsarean section simply offers a forlorn hope that is doomed before you touch it; and it is so rare that the report is of no avail to us. But it is so frequent that children are too large to be born in the natural way, and they have to be killed or die from very prolonged labor, that the practical suggestion of doing Cæsarean section to save the life not only of the mother but also of the child is a very valuable part of the paper.

This is the age, I think, of abdominal section; it is the age of going into the abdominal cavity with impunity. I would like to relate one experience which I think would have saved not only the life of the child but also of the mother, if the doctors had acted upon the knowledge which this paper makes common to us.

I was called to a neighboring town, in my earlier surgical career, when I was not as old or as brave or as competent in any particular as I am present. A woman had been in labor. It was among the poorer classes, it was the very centre of squalor. They were an unhappy, quarrelsome family, as well as a half-starved, half-clothed, and half-frozen family. It was cold weather, and yet they had no fire in the house. The woman had been in labor for a week. She was a hunchback, and also had a distorted pelvis, so much so that it was impossible to even get three fingers as far as the uterus. It happened to be a leg presentation; the feet came down first, and the doctors pulled the child away piece-meal. They got away one leg, and then the other leg, and then the body, and finally the arms, and left in the womb nothing but the head itself. The woman had been trying to deliver that head when I saw her for one week, and they asked me to come and perform Cæsarian section. I went out there prepared for Cæsarian section, at the same time having confidence that, by hook or crook, I could get the remains of that child out of the pelvic cavity. I went with all the instruments at my command, but was unable to strike the head by any instrument with me, and so I was compelled to do Cæsarian section. I performed it in the midst of that dirt and squalor and the uncomfortable surroundings, to the best of my ability. It was *not* an antiseptic operation. The conditions were not favorable to it. What surprised me at that time, was the thickness of the walls of the uterus. I expected to find a tissue-paper wall, thin and wasted away. Instead of that, the walls of the uterine cavity were fully two inches thick.

I opened the walls and removed the head and after-birth, and the blood which gushed very rapidly at first as I went through the uterine walls, stopped itself under the uterine contractions. I had no diffi-

culty in checking the hæmorrhage. I stitched the uterus and the abdomen, and left the patient in the care of an exceedingly incompetent nurse. I am satisfied now, if I had taken the precaution to take a nurse with me I would have saved the woman. She lived one week without fever or chills, or any trouble whatsoever, but at the end of the week there occurred a family row, and she got out of bed to take a hand in the row. The result was, she died in forty-eight hours.

DR. BIGGAR: Perhaps some of the gentlemen in the audience have also performed successfully, or otherwise, Cæsarian section, or knew of the skill of Dr. Lungren, and what he did.

We have a late case in this city by Professor Ludlam, and we have a new case by our good friend and Institute-President, Dr. McClelland. I do not see Dr. Ludlam, nor do I see Dr. McClelland, but, perhaps, if their names are called, they will spontaneously appear.

THE CHAIRMAN: Ladies and gentlemen, Dr. Ludlam is here.

R. LUDLAM, M.D.: Concerning the case which I reported a little while ago, I suppose that everybody reads the *Clinique*, and if they do, intelligently, they must be familiar with the case which I had the honor to conduct. The chairman of the bureau has requested me to give the details of the case, and therefore I will repeat myself with your permission.

I might say, by way of premise, that so far as I know, my case is the only one that has ever been made in this country because of uterine fibroid.

Briefly, the case was one of pelvic obstruction by a fibroid which laid below the child, and which twisted the cervix out of place so it never came down and was not accessible in any way, shape or manner from below. Another peculiarity of the case was, as soon as we discovered the fibroid within the pelvis we also discovered, or had evidence to believe, that the patient was pregnant and at about the fourth month. The diagnosis, however, could not be absolute. I recommended, under the circumstances, the making of an exploratory incision so that the complicated conditions might be plain, and it might appear then as to what would be best, whether to remove the fœtus, to remove the uterus—I mean by way of Paen's operation—taking the tumor along with it or not, or to leave it until term. So at the fourth month, as I recollect, we made an exploratory incision through the abdomen, as usual, and came down to the pregnant uterus lying off to the right side. The appearance of the uterus, the thickness of the wall, made us feel, though we did not touch it much I assure you, that the patient was pregnant. The fibroid could be felt below the brim of the pelvis. It was therefore deemed practically impossible or impracticable that the labor should be consummated under the circumstances, but I said with plenty of space for this uterus to develop, with a good position of the organ, with the

fact that this tumor does not involve its capacity at all, why not let it go on to term.

A reason, and very weighty, too, under the circumstances, was that the parents were said to be very desirous to have a child. The father and mother prospectively were happy with the idea of having a child, and I determined if any means could secure that end, those were the means they desired. So with this backing, with the understanding that the incision was exploratory, the wound was closed, and we decided to await events. I am sure that during the next to the last half of the period of gestation we were all quite anxious as to the outcome of this case. We recommended exercise in the open air, plenty of good food, and all that sort of thing, and in the most natural way she rode about the country and had a good time until term, and then we were to be notified directly there was any appearance of the signs of labor.

I remember very well one evening coming home from one of my lectures with my assistant and found a call to go forty miles in the country by the very first train. We had less than an hour's time to pack up our duds and get to the train. We reached the place about one o'clock in the morning and went to this little private hospital and got ready to look the case over. The waters had been discharged; the cervix could not be felt or found at all; the pain had subsided with the discharge of the water. We had a consultation with Dr. Clark, who was looking after the patient and was to assist us in this matter, and did, very kindly. We resolved, at my suggestion, that we would not wait until daylight lest the pains should come on and constitute an obstacle.

We made a window in that uterus and got the little rascal out of that window safely for himself—or herself, as it turned out—and the mother. We went at it at 2 o'clock in the morning under gaslight, and I should like to have had a photograph of the scene. Not for any advertising purposes—God forbid—but as a sort of reminiscence of the way the thing was done.

We made an incision of twelve inches over the abdomen, and an eight-inch incision through the uterus; came down through the membranes, went through them very gently and quickly, for there was no time to waste nor time to discuss, and no talk. I had instructed my assistant, Dr. Stetler, who was on hand, and in a lively way, too, I assure you, to tie that chord, if they ever got at it and the youngster was alive, as quickly as possible. The chord was tied after a manner that I recommend in emergencies and haste when you want delivery. He snapped two forceps across the chord. They were gauged forceps. He snapped one here and one there, and a pair of scissors went between, and a great deal more quickly than I can tell it, the baby was off to be resuscitated. When the baby cried, which was while we were delivering the after-birth, we heard the sound

which was music to us and to the new mother. The short of this is, that the mother made a prompt and excellent recovery. The child weighed eight pounds, and I suppose she is going to Sunday-school, now.

H. F. Biggar, M.D.: In regard to the previous report, I would say: in a ruptured uterus it was the first I knew anything about, and the suspicion of it was the syncope. Some writer has said —and it is embodied in the paper—that a ruptured uterus occurs once in four thousand times. This is from the Vienna report. I do not know that it is found as often as that. It is merely a statistic that is given; but another writer says that a rupture of the uterus occurs, with a proper delivery of the child, more frequenlly than is known by the obstetrician. What data he may have for saying so I do not know, but it is so asserted.

In reference to the fibroma, with which Professor Ludlam has kindly given us his interesting case, I will state here, as he did not, that one of the five Cæsarian sections was for a fibroma, in which the child had been been dead three days, and in which the mother had been in labor some thirty-six or forty hours, and it was thought that it was possible to deliver her; but they could not do so on account of the fibrous condition of the os, it being crowded way up behind the symphysis pubis, so that we could not reach it, and we performed the operation; that the weight of the tumor and uterus was eleven and a-half pounds, and the weight of the child was ten pounds; and the woman went ten days before death, and death occurred from hæmorrhage of the womb. We had to use clamps. The ligature-clamps had not been introduced by Keith, and even if Keith's clamps had been in use at the hospital, she was at her home when the hæmorrhage began, and they sent for her physician, but he could not get there in time.

I may state, in conclusion, that Akron, Ohio, has afforded two of these cases. It nearly afforded a third case; if I had received the telegram in time to catch the train the woman might possibly have been saved; but I got there six hours after on the next train, and when I was going to the house, which was three miles out of Akron, and some little distance from the road—for they were poor German people—the two doctors came to meet me in a carriage, and told me about the case, and said that we would have to perform Cæsarian section on account of some obstruction. As I stated in the paper, the conjugate diameter is not the test whether you shall operate or not. There are other conditions existing, which you must look to. When we were leisurely walking up to the house, expecting to perform the Cæsarian section, the husband came out and told us to hasten, and when we got to the door we heard the cry of the child. The child was born. The midwife had turned the woman in a different position, or rather put her in a knee-elbow position, which enabled the child to be born.

This was a case of uterine-fibroma, the size of a cocoanut, situated at the junction of the cervix with the body, and the Doctors could not, under any circumstances, get inside of the womb (so they said); but by the change of position the woman was able to deliver—but at the cost of her life. She died from septicæmia, some seven or eight days afterwards. I think by Pean's operation, or Cæsarian section, if we had been able to reach there six hours earlier, we would have saved the mother.

UTERINE FIBROIDS.

By John W. Streeter, M.D., Chicago, Ill.

The non-malignant neoplasms of the uterus are classed under the general name of fibro-myoma. This compound word covers, at least, two distinct classes—the fibroid or connective-tissue tumor, and the myoma or muscular-tissue tumor. They differ in gross and in minute anatomy. The connective-tissue tumor is *in* the uterus but not *of* the uterus. It has a well defined, though loose, capsule, from which it can be shelled out without serious deformity to the organ in which it is found. It is slow of growth; never appears before puberty, or after the menopause; rarely *increases* after the menopause; causes hæmorrhage, at times, and pressure-symptoms, but does not often give constitutional symptoms, and is seldom the immediate cause of death.

The myoma is chiefly hypertrophied muscular tissue. It is *in* the womb and *of* the womb. It has no capsule of any kind, but gradually shades off into healthy tissue. It is usually found at the fundus, but it often involves a large portion of the organ. It cannot be removed without seriously mutilating the uterus. It grows rapidly, gives constitutional symptoms, as well as hæmorrhages, and it is frequently the subject of degenerative changes, either cystic or myxomatous.

The fibroid is much more common than the myoma, and it alone is taken as the subject of this paper. As the chief interest in all morbid growths hinges on the treatment, I shall have but little to say in regard to its pathology, ætiology, or symptomatology.

All fibroids of the uterus begin their lives within the muscular wall of this organ. They remain interstitial or intramural, or they grow in the direction of least resistance, and finally become either sub-peritoneal or sub-mucous. This accidental development gives rise to the three varieties under which these tumors are classed. But whether interstitial, sub-peritoneal, or sub-mucous, the tumor always

presents the same general characteristics. It is a connective-tissue tumor, firm, hard, somewhat elastic, pale in color, cuts like cartilage, and its cut surface shows concentric layers of connective tissue arranged around one or more centres. It grows after the manner of exogenous plants by appropriating layer after layer of the loose connective-tissue bark, which we call its capsule. It receives its blood-supply from the large vessels which ramify in this capsule. Few vessels and no nerves penetrate the substance of the tumor. More than 90 per cent. of these tumors show themselves between the ages of 25 and 45. In clinical interest these tumors increase in importance from without inwards, the sub-peritoneal ones being of least importance. Situated under the covering membrane of the uterus, they have a strong tendency to become pedunculated, and retain but a slender hold upon that organ. They do not, as a rule, greatly increase the size of that organ, do not often cause an increase of the menstrual discharge, and are only troublesome on account of pressure symptoms. Indeed, they sometimes sever connection with the parent organ and form other attachments, or remain free in the abdomen; nature, in these cases, giving the hint to the surgeon as to the best method of treating pedunculated sub-peritoneal tumors, if they become burdensome. This variety seems to be but little affected by either medical or galvanic treatment. If the patient cannot tolerate the growth, there is but one remedy and that the knife.

The intra-mural tumor gives more marked symptoms. The uterus is enlarged in exact ratio with the size of the tumor; the mucous lining is increased in area, thickened, softened, and made more vascular. This gives rise to the menorrhagia which is such a frequent symptom. These cases do not often give sudden and profuse hæmorrhages, as do the sub-mucous ones; but the bloody discharge is so continuous as to be a serious drain upon the woman. Add to this, the pressure upon rectum or bladder, or both, and we find a combination which is distressing. Medicinal treatment and galvanism promise more in these cases than in the former, but still they do not show very satisfactory results. It is the *sub-mucous* tumor which gives rise to the most distressing and serious symptoms, and it is, therefore, of the greatest clinical interest. Fortunately, this variety gives us the widest latitude in means of relief, and, in most respects, the most satisfactory results.

We will, for a moment, consider the *cause* of the symptoms which

the sub-mucous tumor produces. The symptoms of sub-mucous fibroids are such as would be caused by a foreign body in the uterine cavity. Nature's efforts to force this body, first into the cavity of the womb and then expel it entirely, gives rise to pain from unconscious contractions, irregular discharges of mucous and blood from the whole lining membrane, and occasional profuse hæmorrhages from ruptured vessels or sinuses in the capsule. The effort of nature to pedunculate these growths and then expel them, gives the surgeon a useful hint as to treatment. A moderate percentage of these tumors would be disposed of by unaided nature if it were safe to wait. Pedunculation, with gradual wasting of the pedicle, ulceration of mucous covering and capsule, with enucleation *in toto*, or the breaking down of the tumor and its discharge in offensive fragments, are not uncommon, and some women pass through the ordeal in safety. But the dangers from hæmorrhage, and especially from sepsis, make the careful surgeon unwilling to trust to unaided nature, and they force him to do in an aseptic and rapid manner much the same things that nature is trying to do in her slow and poisonous way.

Now as to treatment. First, What medicines may be expected to act upon those neoplasms, either directly or by diminishing the blood supply to the capsule? Almost every remedy in our Materia Medica may be called upon to cover direct or intercurrent symptoms, but very few have any control over the tumor itself. The medicines which have been the most used are, First, the Bromides, which are fast going out of use. They were used long and indiscriminately, but with little effect. Second, the Iodide of lime in material doses, in the hope that the deposit of the lime in the capsule would cut off the blood supply and change the growing tumor into the quiescent "womb-stone." There are a few cases in which this remedy seems to have done some good. Third. Hydrastis can. is coming into rather frequent use to moderate the hæmorrhages and for a supposed specific action upon the tumor. Fourth, Ergot. This remedy has had many advocates, and is still in frequent use. It acts in two ways: First, through its influence on the muscular coats of the arteries, it diminishes their calibre; and second, by exciting muscular contraction in the uterus, it cuts off the blood supply or favors expulsion of the tumor. In well-selected cases Ergot will prove a useful adjuvant, but it should not be depended upon in *any* case, and

is absolutely useless in most. In the sub-peritoneal variety it is worse than useless; in the interstitial it is of doubtful benefit; but in the sub-mucous tumor it may, if wisely used, aid in the enucleation or the pedunculation of the growth. Thus much for the specific medication of fibroids. It is not to be relied upon. I will not speak of the symptomatic medicinal treatment, for that would involve the naming of half of our Materia Medica. Well-selected remedies will *relieve* the urgent symptoms, but they rarely, if ever, cure the fibroid.

Electricity holds a prominent place in the treatment of these growths. So prominent has it become since Apostoli formulated and published his methods that, in the opinion of many gynæcologists, no case should be operated upon until it has first been thoroughly treated by the galvanic current. My investigation and observation teach me that at least 50 per cent. of sub-peritoneal and intramural tumors are benefited by galvanism, and some of them are cured. The common result in favorable cases is moderate shrinking of the tumor and a marked diminution in the symptoms, due to pressure or congestion. In the sub-mucous tumor the chances of permanent improvement are not so good. The positive pole will check the hæmorrhage for the time, but it is apt to return. In some cases it is the best treatment short of enucleation. The only great change which has come since Apostoli formulated his views is the disuse of the needle and actual puncture. Equally good results are obtained with the intra-uterine electrode, without the dangers which must attend puncture. The almost universal rule is to use the large abdominal pad with the positive pole and a small intra-uterine electrode attached to the negative pole in all cases not complicated by hæmorrhage. In the bleeding cases the poles are reversed. A serviceable current is from 75 to 250 milliamperes continued from four to twelve minutes, and repeated from two to six times per week, as the case can bear it. Treatment should be followed three weeks in each month for three or four months.

The surgical measures for the palliation of symptoms are: first, ligation of uterine arteries through the lateral fornices; second, the removal of the ovaries and tubes. These measures are warranted in hæmorrhagic cases, in which, for various reasons, radical measures are contra-indicated. Ligation of the uterine arteries is simple, easily done, and unattended by danger. As the chief blood-supply

is through these vessels, we have reason to expect a marked decrease in the hæmorrhages. The removal of the appendages operates in two ways. It diminishes the blood-supply (by the ligation of the ovarian arteries), and it produces an artificial menopause and relieves the woman from the periodical congestion which attends her menstrual life. The production of this artificial menopause has given excellent results, as a rule. The tumors cease from troubling, and often decrease in size. A combination of the two methods ought to be safe and very successful. First, ligate the uterine arteries, and two weeks later remove the ovaries and tubes. The blood-supply would then be practically inhibited, and the tumor must grow less. I have done these operations, in one case with the most gratifying result. The tumor was reduced at least fifty per cent. in one year, and the woman lost all consciousness of it.

In speaking of radical surgical treatment of uterine fibroids, we must divide the subject into two classes—those in which the tumor can be removed per vaginam, and those in which it is necessary to open the abdomen. The first class should include only *pedunculated* sub-mucous tumors. The exception to this rule would be an occasional broad-based or sessile sub-mucous tumor. The enucleation of intramural fibroids per vaginam is a more serious operation than abdominal extirpation of the uterus, and should not be attempted unless under very exceptional conditions. The pedunculated fibroid is nothing more than a fibrous polypus, and it can be treated as such. The cervix is to be widely dilated, the tumor seized with a strong volsellum and dragged down through the dilated cervix until its pedicle can be reached. The mucous covering of the pedicle should now be cut through and the pedicle "shelled" away from the uterine wall by the finger-nail or some blunt instrument. This insures the total extirpation of the growth. Little after-treatment is required. In the case of a sessile tumor, wide dilatation of the cervix is to be followed by a longitudinal incision through the mucous covering and the loose capsule of the growth. The membrane and capsule are to be stripped back, right and left, until the lower portion of the hard mass can be grasped by strong volsellum forceps. Now steady and persistent traction is to be made by an assistant, while the operator, with fingers, blunt scissors or such other blunt instruments as he may find useful, strives to loosen the tumor from its capsular bed. There will be some smart spurts of blood, but these

will not last long, for the uterus is thrown into contractions by the traction on the tumor, and we now have a *vis-a-tergo* to help expel this foreign body. The operation is a protracted one, and the patient need not be kept profoundly anæsthetized. She should be watched carefully, stimulated if necessary, and occasionally the operation will have to be suspended for twenty-four hours to give her time to pick up. If this is the case, the vagina and uterine cavity should be left in an absolutely aseptic condition, and thoroughly packed with iodoform gauze. Usually one long sitting will suffice, and the tumor will gradually yield to traction and enucleation. No one should undertake the enucleation of a broad-based fibroid without being prepared to do total extirpation if, by failure or by accident, this should become necessary.

The second class includes all interstitial and sub-peritoneal cases which require surgical interference. During the past few years "Fibromectomy" (or, as the Germans say, "Myomectomy") has been by experiment and improved technique put upon a comparatively safe footing. The great mortality which followed it, even in the most skillful hands, has been so reduced that it now compares favorably with abdominal section for other causes. In most cases where fibromectomy is indicated, it is impossible to determine what the exact operation shall be until the abdomen is opened. The variety, size, position and relations of the tumor have to be considered, and also the age and the social and domestic condition of the patient. In some cases it is of the utmost importance to leave the uterus unmutilated, that the woman may possibly bear children; in other cases this is a matter of no consequence, and the easiest and safest way may be adopted. If the tumor is a subserous one, and distinctly pedunculated, the pedicle may be ligated after the manner of an ovarian cyst-pedicle. The stump should be cut V-shaped and carefully sutured. If the tumor is interstitial and small, the uterus may be split wide open antro-posteriorly, and the tumor shelled out, the uterine walls being drawn again together by layer after layer of buried catgut sutures, strengthened on the peritoneal surface by a few deep silk ones. Sessile, sub-peritoneal, and interstitial tumors, when large, can only be removed by hysterectomy, either supravaginal or total. It is not necessary to go into the details of the various methods in which this operation has been done. All have had their advocates, and most of them some merit. The problem

of the pedicle has been the hard one to solve. Whether it should be treated extra-peritoneally or dropped back like the stump of an ovarian-cyst, was the point of contention between abdominal surgeons. There is little doubt but that the extra-peritoneal advocates could show the best results, even when their only method was to fix the stump in the lower angle of the wound, either with a clamp or elastic ligatures and skewers. Martin's method of total extirpation settled the question of stump so far as his cases are concerned, and it gives good drainage; but it increases the mutilation, the vagina being often impaired. Two new methods for the extra-peritoneal management of the stump have been presented within the last three years: one by Dr. Henry P. Byford, of Chicago, and the other by B. F. Baer, of Philadelphia. Byford's plan is to cut and tear through the anterior vaginal wall, in an ingenious way, an opening large enough to admit the stump, which is to be bent forward and forced through it. The stump is now clamped from within the vagina and allowed to slough. This is unquestionably a great improvement over the old methods, but it lacks in simplicity. It has proved very successful in the skilled hands of its author. The method of Dr. B. F. Baer, of Philadelphia, is simplicity itself, and it commends itself for several reasons: it is easily done, the stump is not ligated, and therefore will not slough; it is left extra-peritoneal, there is no traction upon it, and there is no mutilation of the vagina.

The peculiarities of Barr's operation are ligation of ovarian arteries, cutting loose the upper part of the broad ligament, stripping down the peritonæum from a little above the os internum in front and behind, the ligation of the uterine arteries, either through the ligament or within its folds, the amputation of the neck so as to remove the entire supra-vaginal portion, the stump dropping deeply into the pelvis and being completely hidden by the raw flaps of peritonæum, and the stitching together of these flaps by Lembert sutures. The cervix is now in its normal position as regards the vagina, and is entirely extra-peritoneal. It has no ligature or suture in its tissue, and it is covered by raw peritonæum, which will immediately adhere to it. If, in addition, the cervical canal is widely dilated before it is dropped, it will furnish complete self-drainage in the event of an extra-peritoneal abscess, as was the fact in one of my cases. It seems to me that this is the simplest method of abdominal

hysterectomy and the one which promises the best results. It treats the stump extra-peritoneally without tension and without slough, and it leaves the vagina unmutilated. It is not necessary to add, that in all these surgical methods the most perfect aseptic precautions are of the utmost importance.

Discussion.

H. W. Robey, M.D., of Kansas: The paper of Dr. Streeter has covered the field of fibroids so thoroughly that it would be difficult for me to add anything of special interest to the subject, and I think the best that I can do will be to narrate to you a very few experiences in the management of some of these growths.

Medicines, as a rule, prove inefficient and practically worthless so far as the removal of these neoplasms is concerned. At best, I believe they can only serve the purpose of mitigating or palliating some of the collateral symptoms that go along in the case with the development of the tumor. We see in the medical journals occasionally, it is true, reports of some of these cases being cured by the use of remedies, but I think the fact is, that the actual experiences of cures are very few. Since Lungren promulgated the plan of cutting off the nutrition of these growths, cutting off the blood supplies from the uterus, a good deal has been done in the way of progress in the management of these cases. You know that Dr. Boothby has achieved a great deal of reputation in the treatment of these cases by simply cutting off the blood supply and removing, in many cases, the entire ovaries and tubes, and in ligating the uterine arteries. I have found success attending a number of cases, and where I have tried it I have had no failures in what I might call the Pratt treatment, which consists simply in treating the rectum and the uterine cavity by the methods taught us by Professor Pratt. Where there are disorders of nutrition, where there are hæmorrhoidal conditions, where there are conditions of false growth, false membrane, and spongy conditions of the endometrium, a disordered condition of the blood supply and nutriment of the uterine structure, I have found that by dilating the rectum and clearing up the hæmorrhoids, clearing the cavity and clearing out the *débris*, and setting the circulation going in a normal condition, in a number of cases these growths, especially the intramural growths, have disappeared in the course of two or three months, or had very much diminished.

I have in my mind one case where I was telegraphed to go one hundred miles to see a patient who was bleeding to death from internal tumor. When I arrived the patient was exhausted and scarcely able to lift a finger or to speak above a whisper. I found there was a growth of a very large size protruding. I immediately removed it. The lady made a good recovery, but in a little while another

developed. She then came to Chicago and submitted herself to a prominent surgeon in this city, and he removed the growth. She went home to Kansas, and in a short time another developed. She came back to Chicago, and for some reason or other, I know not what, the surgeon to whom she had applied at first here, who had removed one tumor for her, declined to operate again, and sent her home. She came to me again, and I anæsthetized her and made my preparations for removal. But after I had given her an anæsthetic and dilated the rectum sufficiently so I could pass my hand and make a more thorough exploration, I saw the tumor was intramural, involving at least one-half or two-thirds of the uterine wall, and I thought I knew enough to back out of the undertaking. I did back out. When she recovered from the anæsthetic I said to her that I believed that the Apostoli treatment was the right one for the case. I gave her galvanic treatments for three months, every day for three weeks of that time, and then, when the period passed, the hæmorrhage being comparatively insignificant, I applied it every other day for another three weeks. When the next period recurred the hæmorrhage was almost entirely abated, and after that I gave another month's treatment. The patient went to California, and I had a letter from her a few weeks ago, saying, that so far as she could discover, the tumor had entirely disappeared. In that case I supposed, as nearly as I could ascertain, that the tumor was as large as a moderate-sized cocoanut, but by giving the galvanic treatment it has entirely disappeared.

I find that that treatment is very serviceable in a goodly number of these cases. I remember a case that occurred in my city, where the patient had a very large growth of that kind. She had the treatment of a number of physicians, and finally she wanted to go back to Scotland (of which country she was a native) before dying, and I gave her a letter of introduction to Mr. Keith, who was at that time perhaps second to Apostoli, the great apostle of the galvanic treatment. He gave her the treatment three months, and told her he could do nothing for her. He had arrested apparently the growth and caused a diminution of probably one-half the size of the growth. It was intramural. She came back to me, and I took up the treatment again myself, and followed it about three months longer, in which time the tumor had almost entirely disappeared, and she is now in good health, vigorous and active, doing her own work about the house, and seems to have very little or no inconvenience whatever from that cause.

In the great American desert we raise a good many things. We raise cane sometimes; we raise wheat and corn, and we raise some large tumors. You remember, a few years ago, perhaps, that Mr. Nast, in making an illustration of the Kansas calamity of grasshoppers, pictured a field of wheat and a rail fence, and on the other side

a very large grasshopper with the motto " In this wheat by and by." Now, in that country where we raised two hundred millions of corn and a hundred and fifty millions of wheat in a year, we sometimes raise large tumors. I have, bottled in my office, and I meant to have brought some photographs of it (but forgot them), a fibroid that weighs thirty-six pounds avoirdupois. It was sub-peritoneal. It required the making of a large abdominal section, a large incision and a long one, and the tumor, when turned out of its bed and severed from its attachment, filled a good foot-pan almost level full. I took it to the undertaker to see what he could do in the way of preserving it, and he embalmed it for me. He passed his trocar and his aspirator in the tumor at least in fifty or more places, and could find no sac or cavity or any liquid of any kind—the growth being entirely and absolutely solid, through and through. I am very sorry I cannot produce it and show it to you, because it is really to my mind a rare sight. It was a bloody piece of business, but I was fortunate in getting it out safely.

Geo. Royal, M.D: I would like to relate just one case, because of the statement that has been made by two of the speakers upon this subject, and I agree with the speakers: and that is in the ineffectual use of remedies as a cure. Eight years ago there came under my care a lady who had been married five years, suffering from all the symptoms of a fibroid. She went to New York and was examined by Thomas. A diagnosis was made of interstitial fibroid, and she was put upon Ergot by hypodermic injection. The result was not satisfactory. The tumor increased, and she went back for a re-examination, taking a sister with her who was suffering from the same condition, and who was to be operated upon also. The sister died in the operation. The woman returned home, having firmly made up her mind that she would live as long as she could, and refusing to have the operation performed. I did all I could to encourage her and to have her submit to an operation, but she objected. Then I thought there was just one thing to do, and that was to ameliorate the symptoms as much as possible. She was obliged to be in bed about eighteen of the twenty-eight days. I put her upon Trillium the second day, simply to control hæmorrhage. The result was slow, but I could see improvement. More than that, after about one year's treatment, and she took this Trillium fourteen out of the twenty-eight days, I could notice a perceptible difference in the tumor, and she became pregnant. She miscarried, during the five years under treatment, three times; but after being treated about five years and two months, and, I should say, taking Trillium about two-fifths of that time, she gave birth to a child at term; and at that time I should think the tumor, which before had been larger than a good-sized orange, was hardly perceptible. The child is now about three years old, and I have examined her twice and am unable

to find any trace whatever of the tumor, and the woman is perfectly healthy. Whether the remedy had anything to do with it or not I cannot say, but I am inclined to attribute a little benefit to the medicine.

E. B. FINNEY, M.D.: I had one case come to me last fall which I saw once before I operated upon it. There was, in the city, an identical case operated upon by our best surgeon in the Old School. My patient was fifty-two years of age, and his thirty; my growth was of fourteen years' duration, while his growth was only of about five. My patient was exhausted, and could not sleep at night any longer than one hour at a time before she would have to change her position.

In his case, it was an interstitial fibroid, and he cut into the tumor through the vagina, first dilating the cervix. He found it would be a very tedious job to remove the tumor per vaginam, so he then performed laparotomy, removed the ovaries, and turned his patient loose to get well.

I cut into the tumor; and my patient wanted a child, if she could possibly have it, and she says, "Doctor, I have faith in Homœopathy, but if you can save my ovaries do it above all things; make it the last resort." I found it a tedious job; but I introduced my knife and made a long incision through the mucous membrane to the tumor. I then grabbed it with a pair of forceps ordered specially from Philadelphia, and with a long pair of shears I removed it piecemeal, and the largest piece was no larger than that (indicating), and the last piece was about the size of my fist; it weighed three pounds and a half.

I believe that we, as Homœopathic surgeons especially, scattered through the West, are afraid of the criticism that may reflect upon our school if a case results disastrously; and again, I have a horror of removing an ovary if there is any way of preventing it, and I believe if we will only use care, and take these cases and instruct our patients that an early operation will prevent failure, and may-be give conception, it is our duty as surgeons to do it.

H. F. BIGGAR, M.D.: First, let me congratulate Dr. Streeter on his valuable paper, which I have enjoyed very much. I did not understand that Dr. Streeter mentioned the diameters of the fibroid. If he did, it escaped me.

In the use of electricity, I have found that it is of no use in those tumors at all. Where you get the fibro cystic or soft tumor, you get a condition of septicæmia which you must avoid; the advantage of electricity is in the smooth, round tumor. Is it not so, Dr. Streeter? If it is nodulated in any way whatever, you do not get the natural contraction you would wish from the electricity.

One other point, which is a clinical experience with myself. There are two remedies very valuable. One is the Ergot, and the other is

the Ustilago. But there are two conditions in which one is good and the other bad, and *vice versa*. If you have the hard fibroma, you get a good action from the Ergot, but if it is soft, you get a good action from the Ustilago.

One word more and I am done. In whatever condition you may find a uterine fibroma, in all the different varieties, do not hesitate to look well to the diet, because it is true that this neoplasm is caused from connective tissue, and connective tissue is fed by starch or sugar. Put your patient on the roast beef or red-meat diet, and exclude all starches, and give them nothing but good green vegetables, and you will find great relief from these growths. .

Dr. Wilcox: I would like to enter my endorsement of the statement about galvanism in these fibroid tumors. I have had many cases of fibroid tumors, and I am sure that galvanism has served me well. All growths are relieved by galvanism. Six years ago, I reported a case of fibroid tumor at Saratoga which I had relieved, which measured forty-six inches, and which I, in a few months reduced to twenty-six. I heard from the patient not a year ago, and there has been no additional growth—she has remained well. I am sure it was galvanism that removed the growth and cured her; and I believe that the day has come when galvanism and electricity will be a boon for women in many of their diseases.

VAGINAL HYSTERECTOMY.

By J. M. Lee, M.D., Rochester, N. Y.

This operation was introduced as a cure for carcinoma uteri, but it may frequently be called for in non-malignant diseases, as prolapsus, intractable inversion, neurasthenia, accumulation of pus about the uterus (which cannot safely be reached by abdominal section), extensive laceration, and myoma with protracted hæmorrhage, or pain, not amenable to other treatment. Such well-known surgeons as Billroth, Schede, Schrœder, Martin, Olshausen, Fritsche, Kaltenbach, Gusserow, Leopold and others have placed on record several hundred operations, with a combined mortality of about fifteen per cent.; and a half-dozen individual operators, with series of cases varying in number from thirty-five to eighty, have reduced the mortality to five per cent. This brings the percentage of recoveries down to that of ovariotomy, and is a marvellous record. But we must bear in mind that the primary results are not the most satisfactory or important; the operation is of too serious a nature to be adopted as a palliative—it should be employed as a curative measure only. Olshausen, Shanta, and Fritsche* have each had 47.5 (per cent.?) of their patients perfectly free from recurrence after the lapse of two years. Martin† had, out of fifty-eight patients, thirty-four free from recurrence after more than three years; out of fifty-two patients, twenty-five free from recurrence after four years; out of thirty cases, eighteen after five years; out of nine, six after six years; out of two, two after seven years. This is a combined average of seventy and three-tenths per cent. of his patients who were perfectly well after the lapse of five years. In order to secure these results, the patients must be selected with great care. If the disease has involved the bladder, vagina, rectum, or broad ligaments to such an extent that the uterus is not movable on account of car-

* *Annals of Gynœcology* for November, 1892, p. 78.

† *American Journal of Obstetrics* for October, 1892, p. 535.

cinomatous deposit or adhesions, or so that every particle of the disease cannot be extirpated, this operation should not be considered. However, fixation from inflammatory adhesions is not a contra-indication for vaginal hysterectomy. Unfortunately for humanity, these indications render unfit for operation at least three-fourths of the patients who present themselves for treatment. This is due to the absence of symptoms in the beginning of the disease, the obstacles to an early diagnosis, and faulty teaching.

There are four symptoms which were laid down by the older authors, and regarded as pathognomonic of carcinoma uteri, *i.e.*, pain, fœtid discharge, hæmorrhage, and cachexia. Now these are extreme "danger signals;" when they are present, it would be a miracle if a single patient could be cured, and to wait for them is murderous. As every physician knows, the cervix uteri is not very sensitive, and pain does not develop sufficiently to attract attention until the internal os is reached and the greater portion of the cervix destroyed. Then the uterine nerves and vessels are involved by carcinomatous proliferation; there is hæmorrhage; the discharge decomposes, and is fœtid of course; ichor is absorbed; there is septicæmia—all of which develop the cancerous cachexia. The laity, even, readily diagnose the disease when these symptoms are present, and many physicians wait for them, although modern surgeons everywhere oppose such practice. This careless, negligent and unscientific treatment, or lack of treatment, must be given up, and with it that other untruthful and inhuman doctrine, that nothing can be done to save these patient, heroic and trustful women. In proportion as we do this, will we increase the number of operable and curable cases, and correspondingly lessen the great majority whose disease has been allowed to reach a point where we can only scrape out the sloughing tissue and disinfect the parts. At present three-quarters of the patients come to us at this advanced stage of the disease, and I believe the fact is largely due to the above faulty teaching, which still lingers with the profession.

The symptoms of corporeal carcinoma in the beginning, like those present when it is in the cervix, are not numerous or marked, and the inability to see or feel the disease augments the difficulty of diagnosis. It appears to be more frequent in the nulliparæ, or women who have borne few children, and have not sustained cervical laceration. The attention of the patient or physician is usually

attracted, as in disease of the cervix, by occurrence of hæmorrhage or discharge, which, unlike carcinoma of the portio, may be attended by colicky pains. Bimanual examination does not afford much, if any, information until the disease is far advanced; but the true nature of the malady may be made out by dilatation of the cervix and the removal of tissue from the mucosa for microscopical examination, the same as in the diagnosis of cancer of the cervix. In this site the disease usually develops in women who are free from hereditary tendencies to carcinoma, and have sustained lacerations of the cervix uteri in child-bearing. The rent fails to heal; it is irritated by frequent coition, by parturition, by every move of the body, and finally epithelioma develops from irritation—just as on the lip in inveterate smokers of the clay pipe. Now the most important feature in the treatment of the disease is to recognize it on the start, when it is a purely local affection, and amenable to treatment.

Its early presence may be discovered by inspection. The infiltrated portion is often of a yellowish hue, somewhat elevated and sharply limited. If the disease be carcinomatous, bits of tissue may easily be dislodged by the finger-nail; and where the growth has moderately developed, the information imparted to the educated touch is scarcely inferior to that of the microscope. In women from thirty-five years of age upward, every unusual leucorrhœa, watery discharge, spotting, staining of clothing after coitus, menstrual irregularity, or hæmorrhage, should always lead the physician to be on the alert, lest the above symptoms be misinterpreted, and the case go on to an inoperable stage before the true condition of affairs be apprehended.

There is a popular belief among the laity and physicians, handed down from our fathers, that it is not unusual to have hæmorrhage. spotting, or other irregularities, at the menopause, as a normal condition. This notion must be corrected. It is not true; and it causes untold suffering, and the loss of scores of valuable lives. When these symptoms develop, there are always good pathological reasons for their appearance; the diagnosis of fibroma, adenoma, sarcoma, or carcinoma of the uterus usually explain them, and enables the attendant to apply the appropriate surgical treatment, and thus escape the disapprobation which always follows careless treatment. When this has been done, he may use the similimum if he desires. It is unpardonable negligence to allow carcinoma uteri to advance too far, and

the poor patient to be doomed, before radical treatment is even advised. No physician should attend a patient, especially at the menopause, who has "spotting," hæmorrhage, or a watery discharge, without insisting upon a vaginal examination, the use of the sharp curette, or the removal of a wedge-shaped piece from the cervix uteri for microscopical examination, if necessary. Should the patient decline these all-important diagnostic methods, or radical treatment, the only way to escape condemnation is to abandon the case. If the family physician does not take this course, the surgeon may shield him faithfully and conscientiously, yet the friends will ever after censure that physician, and very justly so, too.

In the preparatory treatment most operators consume from three to six days. This is not only unnecessary but positively harmful. Patients grow very nervous after they enter the hospital with the expectation of an operation; and a long and tedious course of dieting, scrubbing, and douching, unsettles and depresses them. I do not favor curetting as a preparatory treatment. It subjects the patient to unnecessary operations, with loss of blood and strength; it opens the vessels, and may give rise to sepsis or cancerous affection. While I know that the success of every operation depends upon the most careful preparation, yet I believe that eighteen hours is sufficient time for any surgeon to place his patient in the best condition of surgical cleanliness and thorough preparation for the anæsthetic. My patients do not usually go in the hospital until the night before the operation is to be performed; then they have a general bath, a carbolized douche, 1 to 80, or a bichloride, 1 to 1000; a clean bed and night clothing. The next morning, a bath and a copious douche is given, and at 7 o'clock a cup of beef-tea only is allowed. The external genitalia are carefully shaved and scrubbed with soap and water. At 10 o'clock she is anæsthetized, brought into the operating room, placed in the lithotomy position, and the parts are again scrubbed and washed with soap and water. The bichloride or carbolic douche is directed on the parts, and the vagina is for the second time thoroughly irrigated and washed out by the finger.

The clamp operation is extremely simple: The patient is brought down on the end of the table, and is secured in position by any convenient gynæpod, or held by assistants. With a strong, blunt pair of scissors the mucous membrane is divided around the cervix uteri, taking care to keep at least one-half inch from the diseased tissue,

and not to enter the bladder or rectum. The flap of vaginal tissue, if it be found necessary to go out so far, is dissected down to the cervix, and the connective tissue between the rectum and bladder divided, chiefly by the fingers and thumb-nail. In most cases, after the circular incision is made, cutting instruments are not used until the broad ligaments are divided, and not a single vessel requires the ligature. In a few instances, however, while separating the bladder or rectum, bands of strong cellular tissue must be divided by the scissors before the dissection can progress.

The pelvic cavity is opened either before or behind the cervix, just as is convenient, and the peritonæum torn from the uterus back to the broad ligaments on both sides.

On account of the stretching of the peritonæum before the fingers, I have sometimes found it necessary to puncture it with a slender pair of uterine dilators, expand the blades, and thus make an opening for my finger. When a good hold is obtained it is not usually difficult to tear the peritonæum back to the broad ligaments on each side. Now the organ is free from all attachments except the broad ligaments, and the clamps may be applied without difficulty. If, however, the vagina is long and narrow, and the uterus above the average size, the case is very different. In such a condition the soft, cancerous granulations must be scraped away, the cervix packed with gauze, and sewed up to prevent infection; then the uterus should be inverted. This affords a great advantage, as it brings the fundus down where the ligaments are within easy reach, so that they can be readily tied by the progressive ligature, or clamped. If these instruments be applied, the sliding knives with which they are provided may be pushed home, and the uterus cut away. This knife attachment is an important feature of the clamps, as in large uteri or small vaginæ it is both difficult and dangerous to cut the uterus away with the scissors.

Another desirable feature of the clamps, as modified by me, is the peculiar and simple hook-lock. The female blade is first introduced under the ligament, and may be used as a blunt hook to draw the part into view so that the male blade of the clamps can be applied over the ligament, by sight. In some cases the ligament cannot be drawn down sufficiently, and we are obliged to adjust the instrument by sense of touch; if this be impossible, it can usually be locked without even this aid. Next, the bladder is sufficiently

distended to be sure that the organ has not been wounded. The rectum also is inspected. If there are bleeding points, they are tied. A strip of gauze is carried up between the clamps to promote drainage, and the vagina protected from pressure by packing gauze between the soft parts and the clamps. Even when this precaution is taken, there is usually superficial sloughing of the vaginal mucosa, but it does no harm.

The after-treatment is conducted in precisely the same manner as after abdominal operations. No food is given by the mouth for two full days. A little liquid may be used to moisten the lips; the thirst can be overcome by the use of hot water enemas, of twelve ounces each, every four to six hours.

If there has been considerable loss of blood, forty-five grains of Sodium chloride and fifteen grains of Sodium bicarbonate are added to the enemas. If shock is present, an ounce of brandy may also be included. The patient is kept on her back for the first two or three days, and gaseous accumulations are relieved by copious enemas of soap and water—or, it may occasionally be necessary to add turpentine emulsion before the bowels can be moved. The urine is drawn or conducted away from the dressings by means of an instrument shaped like a shoe-horn. The dressings are changed at the end of the first twenty-four hours or when necessary, except the gauze about the clamps; this is removed with these instruments at the end of forty-eight hours. If an effort is made to remove the clamps sooner, there is danger of hæmorrhage. In three out of a dozen cases in which I removed them at the end of twenty-four or thirty-six hours, I was obliged to take the patients into the operating room to check the hæmorrhage, which nearly caused loss of their lives. But I have never seen a case of hæmorrhage follow removal of the clamps after forty-eight hours. Boro-glyceride is the best application to use, as it depletes the somewhat inflamed tissues, and keeps the parts supple. It is smeared over the external genitalia, and introduced into the vagina by the fingers. If there is much discharge, or especially fœtor, a carbolized douche is used, and the external genitalia washed twice a day, or often enough to ensure cleanliness. Patients are allowed to get out of bed on the sixteenth day, and to leave the hospital in about three weeks.

The clamp operation is more quickly performed, is attended by much less shock, and secures the vessels with greater certainty than

the ligature. Again, the technique is more simple; the instruments and appliances actually needed for this method of performing vaginal hysterectomy are: irrigator, sterilized water, Sim's speculum, volsella, blunt scissors curved on the flat, artery forceps No. 25 (F), conical sound, No. 1 catgut ligature, dressings, and a catheter with which to test the bladder. This outfit is sufficient in most cases, yet in complicated ones the surgeon should have at hand, besides the above, different sizes of catgut and silk, a scalpel, and aneurism needle. It is my practice never to prepare for a simple case, but secure everything that could possibly be needed under any circumstances.

The operation by means of the progressive ligature, as it is designated, has serious objections, the greatest of which is the fatal shock due to greater traumatism, and length of time consumed with the complicated technique. If catgut be employed, except by those accustomed to its preparation or use, there is danger that it will slip, or absorb too quickly and give rise to secondary hæmorrhage; silk, if cut short, may remain as a foreign body, keep up a discharge, and make it necessary to annoy the patient by a second operation to extract it. If this material be tied down and the ends allowed to protrude from the wound, there is danger of sepsis from capillary attraction, and the silk threads cannot often be removed before the fourth week. Where the clamps are employed, they come off within the first forty-eight hours, there is but little danger of hæmorrhage, and the patients are discharged from the hospital within three weeks. Then, the clamps can be applied much higher than ligatures, even if the vagina be stretched or incised. The objection that the clamp operation is unsurgical, or not an ideal operation, goes for nothing, since better results have been obtained from them than from the ligatures.

For the past six years, I have practiced according to the foregoing principles, with success which has been satisfactory to myself, and a source of great benefit to my patients. During this time I have removed the uterus per vaginam forty-two times. Many of these operations were easy and required but a few minutes; others were complicated, attended by accidents, and demanded all the skill I could command. The shortest operation consumed but eight minutes, and the lady was out of her bed only a quarter of an hour. Three took from forty-five minutes to an hour, and one two and one-half

hours;* the remainder were easily finished within thirty minutes. The complications which prolonged the operations were: Hæmatocele, extension of the carcinoma to the broad ligaments,† very large uteri or small vaginæ, destruction of the cervix, and inflammatory adhesions.

The operations were for the following diseases: Two for prolapsus uteri (one of which was complicated by carcinoma of the portio); two for neurasthenia; one for a complete unilateral laceration of the uterus, with an incurable purulent discharge; one for malignant adenoma; two, each, for sarcoma and carcinoma of the fundus uteri. In the remainder, thirty-two cases, the cancerous disease started in the portio or cervical canal.

Two patients died, and the causes of their deaths were determined by post-mortem examinations. The first was sent by Dr. D. McPherson, of Palmyra, N. Y. Death was from septic peritonitis caused by a cancerous nodule (three-quarters of an inch in diameter) which was detached during the operation, and lodged in the pelvis near the origin of the left broad ligament. The uterus was five inches long, and correspondingly thickened. The operation was exceedingly difficult. The second death was a patient from Dr. W. M. Follet, of Seneca Falls, N. Y., and was caused by ileus. I opened the abdomen and broke up the adhesions which obstructed the intestines, but she did not have sufficient strength to undergo the second operation, and died on the seventh day. Her uterus was four and one-half inches long, and the operation was also very difficult.

Forty-two cases, with two deaths, make my mortality in vaginal hysterectomy 4.76 per cent., a little lower than the average in ovariotomy.

Discussion.

R. Ludlam, M.D.: I am very glad whenever I can offer a word to those who are willing to hear it, that may add to the experience of those who are practicing in so serious a department of gynæcological work as that to which this paper has been devoted. Vaginal hysterectomy is one of the grandest expedients that has been developed by modern times. Its resources are almost limitless, so far as it can be applied to the removal of the uterus and diseased conditions connected therewith. Nothing more marvellous, more wonderful, or

* Recovered without complications.

† One case.

satisfactory has been done in any department of surgery than this particular operation. I have made it a good many times, and every time have been more and more satisfied of its efficiency and of its wide range of application. This paper does not go into detail with reference to anything except vaginal hysterectomy for cancer, and the technique given and the remarks made I most heartily approve. Especially is it impossible to emphasize what the essayist has so well put forth as to the importance of an early diagnosis, and of an early operation when it is necessary at all. This should be emphasized in the presence of general practitioners, because such cases are put off until the evil day has come, and the disease has progressed so far that even this recourse will be of little avail. As to the Doctor's idea that curetting had better be left out as part of this operation, I believe he is perfectly right. As to the desirability of operating upon these patients early, when an operation is determined upon, and not allow them to worry or reflect about it for days and weeks beforehand, and not to bring them into a hospital until you are about ready to go to work, I think is an excellent one. It avoids a mental shock beforehand, and it puts the patient in the best condition for operation, for she doesn't stop to think much about it.

I want to call your attention to one fact, however; and that is, that the French are far ahead of the Germans in this matter, and that the best results have been derived by them, for this is a French operation. The technique which the Doctor has given you is essentially Paen's operation, or Richelieu's operation, neither of whom are mentioned in his paper. As to the results derived from this operation for vaginal hysterectomy, Paen has had the best in the world, not even excepting my good friend Dr. Lee, whose records are the best on this side of the water. Dr. Paen's last report gives one hundred and fifty-eight cases of vaginal hysterectomy with one hundred and fifty-eight recoveries. I am something of a Frenchman by adoption, and do not want the French left out. I do not believe, where you can help it, in leaving ligatures about the broad ligaments.

It has been my good fortune to see the operation made in a number of different ways, and by the best operator in the world (Leopold of Dresden, who always uses the ligature), and by others. The Germans will not make the operation by the French method because it is French, except a single man in Berlin, and he uses the clamps or forceps. In Paris, nobody will use the ligature because it is the German method, and the best way for us, who are cosmopolitan, is to have both, and use whatever we like; but I believe, with Dr. Lee, that the clamp is much better and safer.

I want to say this one thing in favor of vaginal hysterectomy as over any form of abdominal hysterectomy that has been devised or

practiced by anybody anywhere. In the excellent paper that we have had on uterine fibroid, nothing was said about these tumors being always almost multiple, and of their recurrence. They don't come back in the same stump, but there will be another sprout, like potatoes. Now so long as any of the uterine muscular tissue is left behind by any operation for uterine fibroids, there is a possibility and probability of recurrence. If you know your business you can take them out through the vagina. I have taken out by the vagina a uterus with twenty-three fibroids attached to it.

REMOVAL OF THE ENTIRE UTERUS, TOGETHER WITH THE APPENDAGES, FOR UTERINE FIBROIDS.

By Homer I. Ostrom, M.D., New York, N. Y.

Since sending the title of this paper to our Chairman, I have been able to clinically verify the entire practicability of an operation that I have advocated for several years, namely, when we remove the ovaries and tubes for diseases of which they alone are the seat, we not only can, but should, remove the uterus also. With your permission, therefore, I will include the above proposition in this discussion, reserving it, however, for the close of the paper.

With a better understanding of the principles of operative surgery, and the perfecting of surgical technique, many operations are justifiable and possible that formerly would not have borne the test that should be applied to all scientific procedures. Thus it has come to pass that abdominal surgery occupies its present proud position, for, as a rule, knowledge must precede practice; and while surgeons for many years prior to the work of our countryman, Ephraim McDowell, believed that abdominal tumors should be removed byoperation, it has only been by the elimination of sources of failure, the removal of erroneous conservatism, and the perfection of methods, that we are able to show such great results in this branch of our art.

Especially, does what I have said apply to the treatment of uterine tumors. Ovariotomy was recognized as a legitimate operation long before hysterectomy was placed in the same position; and, even now, in some quarters, among those who advocate electrolysis, the advances of this branch of abdominal surgery are steadily resisted. But we cannot discard well-founded theory, or refuse facts gained from clinical experience.

There is nothing in the operation of abdominal hysterectomy, *per se*, that should give the high mortality that we have heretofore been obliged to record. With improved technique, hysterectomy for uter-

ine fibroids should not give a higher mortality than ovariotomy. The length of incision necessary to remove a large tumor has long ceased to be regarded as influencing, one way or the other; and the manipulation of the abdominal organs need be little more than in ovariotomy. Of course, there is more manipulation than in a plain-going ovariotomy, but not more than in cases in which there are adhesions to break up and tie. I think, therefore, we are justified in concluding that the former mortality of abdominal hysterectomy is, in a large measure, due to the method of operating, to an erroneous conception of pelvic physiology, and to false conservatism.

What, for example, when applied to any other department of surgery, can be less in accord with modern surgery than to leave in position a part already diseased, or, judging from its previous history, one that will very probably become diseased? Or, what is less in accord with all that antisepsis has taught us, than to deliberately invite suppuration and sloughing of tissue as in the extra-abdominal treatment of the uterine pedicle? Why, it may with reason be asked, should we leave the appendages, or any part of the uterus, when the major part of the latter organ is taken away? We have long since given up the clamp in ovariotomy; why should we continue its use in hysterectomy, and why should we leave any pedicles to clamp? It is a cardinal principle of all operative surgery, that the risk incurred is in proportion to the tissue constricted, and that the ideal method of controlling hæmorrhage is by ligating the artery only; in proportion as we apply the general principles of surgery to abdominal work, and do not make it in any sense an exception, I believe we will make it a success. The abdomen is not different from other parts, save that it contains organs essential to life, and is, practically, a closed cavity; and if we work here, as elsewhere, carefully, expeditiously, with cleanliness, removing all diseased tissue, tying all arteries, and providing means for the escape of injurious fluids, laparotomies should be attended with no more danger than any other major surgical operations.

But it is unnecessary to dwell on the advantages to be derived from leaving no pedicles in abdominal hysterectomy; they are apparent, and need not be defended. The question is, how can this be accomplished with a minimum risk. From the cases that I have had during the past winter, eight in number, in which I have removed the entire uterus, together with the appendages for uterine fibroids,

I am led to believe that this operation is less dangerous than under the old method of clamping a uterine pedicle. It is certainly more difficult; but this should not weigh against the advantages gained. All of the eight cases have recovered promptly, with but little suffering, and with really no constitutional disturbance. Indeed, the usual symptoms of change of life so frequently observed after double oöphorectomy, have not been well marked. With increased facility there has been a corresponding decrease of shock attending the operation, the last operation having been completed in thirty minutes. This patient walked from her bed to her chair on the eighteenth day, and returned to her home in four weeks.

My method of operation is simple, and capable of great rapidity, a matter of importance to the patient when consistent with safety. After opening the abdomen, and I make the incision large enough to allow free manipulation, I raise the tumor by screwing into it my broad-flanged corkscrew. With curved needles which I have had made for the purpose I ligate first the left ovarian artery as near its origin as possible. I then tear or cut the broad ligament down to the vaginal vault. This brings the uterine artery into the field of operating, which is tied in the same manner as the ovarian artery. The right side is then treated in a similar manner. The bladder is next separated from the anterior uterine surface, and then the rectum from the posterior surface, when it will be found that the tumor, uterus and appendages can be lifted out of the pelvis. But four ligatures remain as the result of the operation, and after placing a drainage-tube in the vagina, the abdominal wound is closed.

Now, upon drainage I lay great stress, and consider that upon its accomplishment depends much of the success of the operation; for, in the first place, it is an indication of what is going on in the abdominal cavity; and in the second place, it acts as a safety-valve for congestion of the peritonæum. But I have found considerable difficulty in maintaining vaginal drainage, for while this is the mechanical drain of the abdominal cavity, it is a fact that the vagina tends to close more rapidly than is consistent with perfect and continued drainage. Moreover, the pelvic organs seem to fall upon the drainage-tube, and close the mouth.

I have tried various methods; the latin-cross drainage-tube, the glass drainage-tube, the iodoform gauze—not one of these has in my hands, so far, furnished the ideal vaginal drainage. If any

preference is given, I think it is in favor of a curved glass tube, or a tampon of iodoform gauze. Either one of these keeps the vagina open (the latter especially), while the rubber tube closes, and the discharge takes place outside of it.

I have come to look upon a free discharge during the first twenty-four hours as rather favorable than otherwise. Not of blood, for this should practically cease in six or eight hours, but of a bloody serum—for this indicates that the peritonæum is functionally active, and therefore that the pelvic circulation is not in any way interfered with.

The time for removing drainage depends upon several conditions. A feeling of local uneasiness or pain in the rectum, or an absence of discharge, will point to its removal; for when these conditions exist the tube has fulfilled its office or is not doing its work well—in either case drainage should be discontinued or readjusted.

In some cases, when the tumor is very large and grows low down in the pelvis, it may be necessary to apply the temporary clamp before tying the uterine arteries. This happened in two of my cases, but I think it must be exceptional, for after liberating the upper border of the broad ligament, the principal obstacle to raising the uterus is removed.

There is sometimes rather troublesome bleeding from the posterior vaginal opening, though why, I cannot say—for all circulation is cut off from the azygos artery after tying the uterine arteries, of which it is a branch. Possibly there is some anomaly of the circulation. It therefore would probably be good practice always to sew the serous and mucous surfaces together with fine catgut before closing the abdominal wound.

I am of course aware that only very imperfect deductions can be drawn from eight cases; but in reviewing these they compare so favorably with those operated on by the extra-abdominal-pedicle method, both as to mortality and convalescence, that I am forced to the belief that the principle is a true one, whatever may be the changes and future improvements in the technique of operating. As an offset against the great suffering and prolonged convalesence attendant upon the suppurating pedicle and consequent dangers of septic infection, of the older methods—and of all these I regard the elastic ligature and pins the most pernicious—we have the minimum degree of suffering (I have never been obliged to give morphine

after this operation), a convalesence that is not prolonged over more than three weeks, no suppurating pedicle, and no danger of septic infection. I do not regard this operation as severe as the older one, nor should it be as long, for usually much time is consumed in making and securing the pedicle. From all aspects, therefore, theoretic, scientific, and practical, I think we must look upon the removal of the entire uterus, together with the appendages for uterine myoma, as an operation in advance of the older one of leaving a part of the uterus to form an extra-abdominal pedicle.

Let me add a few words concerning the removal of the uterus when the operation is undertaken for diseased appendages. For several years I have considered this an operation that we must resort to if we would give our patients the chances of recovery that they have reason to expect, from the scientific attainments of the day. The technical difficulties in the way of its accomplishment, have, however, until recently deterred me from carrying it into practice; but with a growing disregard of a long abdominal incision, with the advantages conferred by the Trendelenburg position, and with a confidence acquired from my success in total extirpation of the uterus for fibroids, I do not now hesitate to remove the uterus with the appendages, when the latter alone are diseased. The five cases in which I have performed this operation have been perfectly satisfactory. But one died, and that death was not the result of the operation, but was due to the excessive restlessness of the patient and her unruly disposition. These, together, brought on fatal secondary hæmorrhage.

The advantage of this operation over the certainly less severe one of double cöphorectomy is, that the cure is a radical one. I think any laparotomist of experience will agree with me that cases of the removal of the appendages are not always followed by the expected brilliant results. Pain continues, frequently more severe than before the operation. The uterus remains sensitive, generally becomes displaced, either backwards or downwards; in other words, becomes, after the removal of the ovaries and tubes, a foreign body, and as such is subject to the laws that govern such bodies. Again, I repeat, that with improved technique, and with a better understanding of reproductive physiology, to cure our patients, when it becomes necessary to remove the appendages, we must also remove the uterus if we would give them all that they have reason to expect at our hands.

My method of operating is very similar to that of removing the uterus and appendages for uterine tumors. The manipulation, however, is more difficult, for the reason that no large foreign body has existed to push or to displace the pelvic viscera upwards; but with a large incision, and with the intestines held out of the way, the operation is rendered comparatively easy.

Discussion.

Alonzo Boothby, M D.: In discussing an operation like "Total Extirpation of the Uterus through the Abdomen," it is necessary to consider, not only the danger attending it, and the results that may be expected from it, but we must take into consideration the character of the disease, whether it is likely to produce serious disturbance or death in the near future, or is likely to remain comparatively harmless for some time.

I think we may safely agree with the paper just read, that this operation has come to be recognized as not only a justifiable one under extreme conditions, but one that should be frequently made. Probably—in fact, I should say undoubtedly—the danger from it is a little more than from ovariotomy, or from the removal of ovaries and tubes, and certainly it is a more difficult one to make under ordinary circumstances, but it is not more dangerous than ovariotomy was a few years ago.

The question arises—when or for what diseases shall this operation be done? I should say that, with very few exceptions, it should be done for only two conditions—uterine fibromata and malignant diseases of the uterus.

In the paper I am to discuss the claim is made that the uterus should be removed when the ovaries and tubes are removed, whether it is diseased or not. I should most decidedly take exception to this.

I do not believe that it should be removed unless it is the seat of a disease that is not readily cured. The failure to obtain favorable results will not be found to be in a healthy uterus. That must be sought elsewhere. It will frequently be found in a non-absorbable ligature.

I assume this, because I have had very much less trouble following my abdominal operations since using nothing but catgut ligatures. Another source of trouble is the disturbance to the bowels from their unfavorable position, and from the adhesions which are unavoidable.

The method of operating has not been quite so clearly put as it might be. True, one long incision and raised hips are essential steps, but when we consider that we are working between the bladder in front and the rectum behind, with the ureters on each side, it becomes necessary to cut and sew with the utmost care. Then, it is a

fact that aside from the ovarian and uterine arteries, the parts to be severed are very vascular and great care must be used to be sure that all vessels are secured. Just here it may not be out of place to suggest that the case of death from what the Doctor calls secondary hæmorrhage caused by the restlessness of the patient, was due to hæmorrhage from small unsecured vessels, and that the restlessness was due to this hæmorrhage. I am very positive in my position that we never have secondary hæmorrhage except from a defect in securing the vessels, as the result of a septic inflammation, or from such violence as would be impossible from the movements of a patient.

After having removed the ovary in the ordinary way, I tie the broad ligament in sections and cut it across, keeping close to the uterus. This is done on each side; then an incision is made through the peritonæum, in front and back, so as to leave flaps that can be easily united later on. The separation of the uterus from the bladder can be made quite rapidly and safely, by keeping hard against the uterus, and the same is true from behind. In case of a perfectly healthy cervix, the dissection should be carried well down so as to leave a comparatively small opening into the vagina. After the removal has been completed, then the parts should be brought together, using at first buried sutures, and at the same time closing all the bleeding vessels. This will bring the vaginal mucous membrane well up to the peritonæum, which is to be stitched together, forming a long seam from the site of one ovary to that of the other. In the centre a rubber drainage-tube may be carried down into the vagina; this should be held in place by a catgut suture, and should not project outside. If care is used in stopping all bleeding, and in bringing the peritoneal surfaces together, there is scarcely more need of a drainage-tube than there is in making a simple ovariotomy.

During the past three months I have removed the uterus five times, four of which were for uterine fibroids, and one for carcinoma of the uterus, and in neither case has there been any symptoms more severe than from a simple ovariotomy, but evidences of a more profound impression upon the system have existed, and it has required a longer time for complete recovery.

I shall not raise the question as to whether every case of uterine fibroid should be removed, and with it the uterus, but content myself with the opinion that this is the course to pursue in a large number of cases. In carcinoma extending above the vaginal cervix, but not so far as to prevent the removal of all the tissue involved, I should advise total extirpation, and that through the abdomen.

THE CHAIRMAN: I think we can congratulate ourselves on the work that has been done here. I don't think the Institute has ever had better work done in this department; and we are in the centre of this work now. If we had a few hours left we could go on and finish up the work. I know that many of you are ready to jump to

your feet with opinions, and the ball has just been opened. Dr. Lee would like to respond, so would others like to throw in their little mite, and so swell the volume of knowledge on this point. We can congratulate ourselves, however, on the fact that we have such a corps of practitioners able to handle the greatest difficulties, and we may well take pride to ourselves when we find men coming here able to compete with the record of any operators on earth. We have them in this room now. The section now stands adjourned.

REPORT

OF THE

SECTION IN MATERIA MEDICA.

CHICAGO, ILL., June 1, 1893.

THE Section in Materia Medica of the World's Congress of Homœopathic Physicians and Surgeons convened on Thursday, June 1, 1893, at 3 o'clock P.M., in the Hall of Washington, Art Institute Building.

Dr. A. C. Cowperthwaite, of Chicago, Ill., Chairman of the Section, after calling the meeting to order, delivered his Inaugural Address, taking as his theme "The Present Condition of the Homœopathic Materia Medica."

The first essay read was by A. L. Monroe, M.D., of Louisville, Ky., entitled "A Study of Sepia, Pathological, Clinical, and Comparative." Its discussion was by Drs. H. C. Allen, of Chicago, Ill.; Lizzie Gray Gutherz, of St. Louis, Mo.; T. F. Allen, of New York, N. Y., and the author of the paper.

The next paper was entitled "My Bryonia Day," by Frank Kraft, M.D., of Cleveland, O. A discussion was had by Dr. Wilson A. Smith, of Morgan Park, Ill., and Howard Crutcher, of Chicago, Ill.

Dr. Wm. E. Leonard, of Minneapolis, Minn., presented a paper on "The Revival of Therapeutics." It was debated by Drs. H. W. Westover, of St. Joseph, Mo., and J. H. Henry, of Montgomery, Ala.

An essay was read by Eldridge C. Price, of Baltimore, Md., on "Practical Psychology in Its Relation to Pathogenesy." The discussion was by Drs. T. S. Hoyne, of Chicago, Ill., A. L. Monroe, of Louisville, Ky., T. F. Allen, of New York, N. Y., and by Dr. Price, the author of the paper.

An essay by Charles Mohr, M.D., of Philadelphia, Pa., entitled "Primary and Secondary Symptoms; or the Opposite Action of Large and Small Doses," was presented by title.

"Phytolacca Leaf, Fruit and Root," by Robert Boocock, M.D., of Flatbush, L. I., N. Y., was also presented by title.

The Section was then, on motion, declared adjourned.

INAUGURAL ADDRESS.

By A. C. Cowperthwaite, M.D., Chicago, Ill., Chairman.

The Present Condition of the Homœopathic Materia Medica.

Over a century has rolled by since Hahnemann laid the corner-stone to the foundation of the Homœopathic Materia Medica. It would seem that one hundred years' experience would have developed all of the faults and all of the excellencies of any system of therapeutics—indeed the present is the only instance where any special system of therapeutics has survived the lapse of a century.

Systems rise and shine for a while, and then fall, to be seen and heard of no more; but Hahnemann built upon a more solid basis. His mature mind had seen the folly of attempting to build a foundation upon sand, and he was therefore extremely careful that the soil upon which he builded should be of an enduring character.

As the years rolled by, and stone after stone was added to the structure, it is not surprising that, with the material and the character of the assistance which Hahnemann received, mistakes should have been made both in the quality and amount of material used, and in the method of its use. So we find, upon examination of the records of provings made by Hahnemann and his immediate disciples, that errors frequently became incorporated into the Materia Medica, sometimes the result of a mistake, sometimes the result of an over-fertile imagination of an over-zealous worker. Hahnemann was naturally systematic in all his methods, but in spite of all his efforts it was impossible for him to insure system with all those who assisted him in the work he was carrying forward. Then, too, in the enthusiasm of the time, Hahnemann allowed to enter into the make up of his Materia Medica, symptoms which he did not claim to have obtained by provings, but which he had seen so often pass away under the influence of the remedy, that he felt fully justified in incorporating such symptoms in the Materia Medica. The experience

of one hundred years has strongly developed the truth of many of these so-called clinical symptoms, as it has at the same time shown the weakness of many pathogenetic symptoms obtained by certain of the provers, to whom reference has already been made.

If we take the Homœopathic Materia Medica of to-day and examine it as a whole, we cannot help being appalled at the magnitude of its symptomatology. The first thought that strikes us is the necessity of reducing this vast mass of symptoms into a smaller compass, with (if possible) a more reliable and systematic fonndation. To this end many workers in Materia Medica have been aiming for the past quarter of a century. That it is no light task, is evidenced by the fact that as yet but little headway has been gained, and it is more than probable that the headway which has been gained has not been altogether in the direction of a better and purer Materia Medica.

Ever since the *Encyclopædia of Materia Medica* was given us by Dr. Allen, special attention has been called to the necessity of weeding out the mistakes that have been made in the accumulation of that vast amount of material necessary to give us the Materia Medica of to-day. How to accomplish this result without doing more injury than good has been a problem that has not as yet been solved.

Undoubtedly, with the wheat has grown up much chaff that should (if possible) be separated therefrom. One might say that it were better to let them grow together until the harvest; another might reply the harvest time has already come, and the separating of the wheat from the chaff ought not longer to be delayed.

The first important movement in this direction that has received the official sanction of the Homœopathic School of medicine is embraced in that most admirable, yet greatly abused work, the *Encyclopædia of Drug Pathogenesy.*

Therein Dr. Hughes has given us the nearest approach to a perfect pathogenetic symptomatology that our school has ever possessed. Others are inclined to work in something of the same direction, the great cry being a reconstructed Materia Medica; but with all who undertake a work of this kind there seems to be the same tendency to too freely discard the entire symptomatology of Hahnemann unless the same be established by such overwhelming proof as to the original source from which it was obtained, that there can be no question whatever as to its authenticity.

While we have admitted the possibility of Hahnemann having

made errors in the compilation of his great work on Materia Medica, and while we are still more willing to admit that errors crept into his work through the agency of those who were acting with him, nevertheless when we contemplate the fact that over a hundred years has not weakened the power of our symptomatology, we ought to realize that it is not a very little thing for us to do to wipe out at one stroke of the pen four-fifths the sum of all the symptoms which have, up to recent date, constituted the Homœopathic Materia Medica. This was not the intention of those who edited the *Encyclopædia*. It was only proposed that this work should be a basis for future experiment in drug pathogenesy, and that it should in no way abrogate the symptomatology of the old Materia Medica. At the same time there are those to-day who see the necessity of doing away entirely with many symptoms which have been the result of careful provings frequently verified.

Careful consideration of this subject shows us very plainly that a large majority of these symptoms which have been the sheet-anchor of the Homœopathic physician for nearly a century are not found in this much desired list of pathogenetic symptoms. There is scarcely a physician living of the older school of Homœopathy that has not verified, many times over, thousands of symptoms which it is now proposed to entirely emasculate from the Homœopathic Materia Medica—indeed, the favored symptoms, those which oftenest lead the physician to the prescription of the drug, are not to be found in the proposed new work on Materia Medica.

When we consider the wonderful success that Homœopathy has achieved during its existence, and when we realize that this success has been entirely due to the application of drugs in accordance with the symptomatology given us by Hahnemann, it is certainly a matter which we should approach very slowly when we think of attempting to throw out very largely the very class of symptoms which have made Homœopathy what it is to-day. Therefore we hold, that while works like the *Cyclopædia of Drug Pathogenesy* are of inestimable value as forming the foundation for future experiments and, if you please, the building of the reconstructed Materia Medica, yet, at the same time, we feel that the duty every Homœopathic physician owes to the memory of Hahnemann and the past success of Homœopathy as a distinct system of practice, is that he should not discard the experiences of the past. It may be that errors have crept into the

Materia Medica from sources which we least expect; it may be possible that Allen's *Encyclopædia of Materia Medica* is a vast mass of rubbish; it may be possible that Hering's *Guiding Symptoms*—that wonderful accumulation of clinical experiences—is worse than rubbish; but these are what has made Homœopathy what it is to-day, and we certainly, from the standpoint of practical common sense, cannot afford to allow them to be relegated to the past in order to make room for a reconstructed Materia Medica upon a new and more scientific—at least more modern—basis.

One writer, in commenting upon the necessity of reconstructing the Materia Medica, says: "The endeavor should be to study drug-effects, and to disentangle from the pure material or adventitious details; to separate the certain and probable from the mere possible, rejecting the impossible;" and he concludes: "Thus, ultimately, will be submitted to the world of medicine and Materia Medica the pure drug-effects and synthetic work that will court scientific analysis and criticism."

This sounds well, and if we can build up such a Materia Medica as this without in the least allowing it to interfere with the Materia Medica we already possess, allowing the latter to be our working material and the former to be our scientific material, until such time has come that its verification clinically shall have placed it beyond peradventure of a doubt, then, very well; but that produced with the Materia Medica of Hahnemann, as now adopted and in use, and which has, as we have already remarked, been the basis of all Homœopathic practice for one hundred years, we contend that this Materia Medica, while it may not, from a modern point of view, be able to court scientific analysis and criticism, is, nevertheless, the Homœopathic Materia Medica, and will so remain so long as time shall endure.

The great trouble in attempting to build up a new and reconstructed Materia Medica lies in the fallibility of human judgment.

The variations of opinion as to the principles connected with the reproving of drugs and the rearrangement of those drugs in a Materia Medica that one might consider to be quite wise and necessary and reliable, another might consider useless and unnecessary.

So while it would seem that it may be best to reconstruct the Materia Medica upon a pathogenetic basis and give us a new Materia Medica that will be scientific and possibly practical, we nevertheless

think this Materia Medica cannot and never will take the place of the Materia Medica already in existence. We may question as much as we please, the fact, however, remains, that those who have most closely followed the symptomatology as we now have it, are those who have been the most successful in their practice.

Perhaps it might prove of greater benefit were we to expend the same amount of energy required for reconstructing the Materia Medica in inducing ourselves and others to more closely follow that which we already have.

We submit, then, that the present condition of the Homœopathic Materia Medica is favorable to the upbuilding of the Homœopathic school of practice if we will only be contented to abide by it and not be continually looking out for something better and more scientific in its character.

I would not have it appear that I would rest satisfied without ever making any advancement by any means. The work of reproving, the work of clinical verification, the work of reconstruction, if you please, should be going on continually, but not in that wholesale way that means the destruction of all that has gone before. Let us make the best of that which we already have, and not allow our great desire to be looked upon as intensely scientific and modern in all our methods and plans to cause us to entertain the great mistake of proscribing the only Materia Medica that has ever proved its value at the bedside, withstanding the crucial tests of a century's application.

A STUDY OF SEPIA, PATHOLOGICAL, CLINICAL AND COMPARATIVE.

By A. L. Monroe, M.D., Louisville, Ky.

The early history of Hahnemann, which is coextensive with the early history of Homœopathy, records no more striking example of keen intuition than that displayed in the manner of his introduction of Sepia—the great polychrest—into our Materia Medica. First, in his discovery of this subtle agent as the cause of declining health in his artist friend, and next in his thorough proving of the drug and his swift recognition of its ability to become a valuable therapeutic aid.

Provings so perfect and complete had he made single-handed that the efforts, many years later, of an army of provers, both male and female, kept under trained observation for a long time by the American Institute of Homœopathy not only did not add to or take from their volume, but only verified them in their entirety.

All this considered, I cannot hope to-day to add materially to the knowledge already obtainable by you of the drug, but wish to attempt, as far as possible, to endow it with a distinct individuality, to present to your mind's eye a cameo, clear-cut and concise, of a therapeutic agent that you are gratefully using every day. Not only this, but as the present method of imparting Materia Medica is a subject of perennial interest to all teachers of this ultimatum, this *sine qua non* of medical science, and must ever determine the relative advance of Homœopathy, I will inevitably give at the same time a hint of my own method and, perhaps, draw similarly from other teachers present, thus inaugurating a general love-feast of giving and receiving that may refresh and improve us all.

Sepia is a ganglionic or vegetative, hence we naturally expect it to prove a deep and long-acting remedy, hence one exerting a profound effect upon nutrition.

As, like Apis and Lach., it is an animal poison, we expect it to

produce changes in the blood, affecting not only its chemical character, but also its fluidity and nutritive qualities. In all these respects we are not disappointed. With altered blood, we must expect appreciative effects to be exerted upon the nerve centres, hence a condition of nervous excitement accompanied by weakness—a condition of irritable weakness displaying itself in circulatory ebullitions and depressed nutrition. Here, again, we are not disappointed and can readily trace its relationship with Apis and Lach., as well as with Murex, Moschus and other drugs of animal origin.

With this state of depressed nutrition we are not surprised to find existing a relaxed condition of all of the tissues of the body—an atonic condition, one of lassitude, of muscular weakness and relaxation not only of the voluntary muscles, but more palpably in this case of the muscles supplied by the sympathetic nerve, including those which regulate the calibre of the bloodvessels—a condition very much resembling that found under Gelsem., but more profound and more enduring. Thus Sepia may be thought of as the chronic Gelsem., just as Sulph. is the chronic Acon. and Calc. carb. the chronic Bellad. The most pronounced evidence of this tissue relaxation is shown here by the ever-present tendency in the Sepia patient toward a sagging of the movable tissues, especially the dependent ones, the bowels, the rectum and the womb, giving us many of the most important characteristics of the drug.

1. "The gone, weak feeling in the epigastrium," due to the determination of the bowels toward the lower abdomen.

2. The feeling "as though the womb would drop out, causing her to sit down and to cross her limbs for support," due to relaxation of the uterine supports as well as to the passive hyperæmia of the organ, increasing its weight.

3. The prolapsus recti and the feeling as though there was a weight in the rectum, described by some provers as a "round ball." The same atonic tissues give the Sepia patient the "pot-belly," so characteristic of the drug. Accompanying the above symptoms, we have a sensory hyperæsthesia characterized by mental irritability, an intolerance of odors, of strong light, of noise, indicating the drug in gastric and uterine disorders and sick headache; also an intolerance of contact, often indicating it in vaginal pruritus.

This hyperæsthesia is pronounced in the Nux patient, who has the same intolerance of odors, accompanied here by the irregular,

spasmodic and inefficient performance of gastric and intestinal functions; in the Lach. patient in the intolerance of touch or pressure displayed in the desire to loosen the clothing, especially about the neck and abdomen. In the Phos. patient in the aggravation from electrical changes in the air, as well as from those of humidity. In the Silic. patient in the aggravation from light, noise, motion and thermal changes. In the Arsen. patient in the irritable weakness which is so extreme and is accompanied by such great mental and physical unrest.

The circulatory irregularities found in the Sepia patient are caused by a paresis of the vasomotor nerve, displaying itself notably in the portal and genito-urinary vessels, and producing a hyperæmia of the most dependent organs in their distribution. Hence we get the congested uterus, rectum, ovaries and kidneys, producing, in their turn, reflexes all over the body, and especially are they responsible for the disorders of cerebral circulation and perversion of gastric digestion so closely simulating the disorders of pregnancy and of the climacteric.

With the blood altered in chemistry and specific gravity, we find a lack of cohesiveness in its parts, and an exudation of coloring matters into the skin, producing yellow spots, splotches, and (from the same cause) acrid excretions and scaly eruptions at the bends of the joints where the sebaceous glands are numerous—together with catarrhs from all of the mucous membranes, with acrid exudations, like those of Sulphur, Nitric acid, and Kreasote. This condition reminds us throughout of Natrum mur., which is distinguished by its inordinate thirst, its extreme emaciation, its dryness of all surfaces, mucous and cutaneous.

The two remedies are also much alike, as you know, in their mental characteristics, both showing the uniform depression, aggravated by consolation, with accompanying irritability; but, with Sepia, this mental state generally accompanies vascular excitement, depressing emotions or other nervous impressions. With Nat. Mur. it is, in proportion to the constipation, present. Lycop., too, has the mental depression, the clear, fair skin, mirroring the blood-vessels; the eruptions, the acrid odoriferous discharges, the passive hyperæmia, and the excessive uric-acid deposit in the urine, as found under the other two; but, with Lycop., we find the full feeling in the abdomen, replacing the weak, gone, empty feeling, and the patient is oftener a man.

As to the modalities of aggravation, Sepia, like Sulphur, Lycop., Calc. and other ganglionics, is aggravated in general terms by atonic influences, and ameliorated by tonic influences, as would seem inevitable in a drug whose grand central idea, around which all others revolve and are secondary, is "tissue relaxation." In conclusion, there is no better way of fixing Sepia's place, clinically, than to compare it succinctly with Sulphur, the "king-polychrest."

The Sepia patient is oftener a female, is delicate, dyspeptic, and depressed—the latter both as to mind and viscera. She may be graceful and beautiful, and if typical, she is both; but she is abnormally sensitive, not only as to her special senses, but mentally as well, and the slightest emotion will produce in her circulatory ebullitions; in short, she is so delicately poised that her harmony is easily destroyed.

The Sulphur patient is more stolid and unimpressionable, is generally red in the face.

The Sepia patient is sallow, but red when excited or disturbed. The Sepia congestions involve the portal and genito-urinary systems. The Sulphur congestions may involve, as well, all or any organs. Hence the hot flushes of Sepia begin below the belt; those of Sulphur are first noticed in the increased redness of the face and the dizzy brain.

The difference in symptoms arising from anomalies of portal circulation, as between Aloe. and Sepia, are almost, as we know, identically those differences just pointed out between Sepia and Sulphur.

So much for a great polychrest of established reputation, about which, if I have thrown any new lights, I have not taken your time in vain.

Discussion.

H. C. Allen, M.D.: I only wish to emphasize a few words spoken by my friend, Dr. Monroe, in a *résumé* of the action of Sepia, and enlarge upon one or two things that he touched upon lightly. The indications of Sepia that come to the surface are paramountly true of disorders of menstruation and pregnancy. The peculiar characteristic of the remedy—the peculiar aggravation that takes place during those disorders, for instance, a terrible constipation. It differs from many of the other remedies, and it is in some of these differences that its force lies. For instance, the Phosphorus

patient feels a change, an hour or hours or even days before it occurs. This is particularly true with some changes to which Sepia is so characteristically adapted: as the change of snowy weather in the spring time, and in the autumn when the first snow falls; when the light snows fall in March and April. One of the characteristics of Sepia has helped me out of a great many difficult cases, and perhaps it will help some of you if you will study it carefully. You have a child, three, four, or five years old, playing in the snow-storm. The child is almost certain to take cold, or the cold takes the child, I do not know which. The result is a cough, a laryngeal hacking. This is constantly going on and becoming more violent, finally almost croupy, if not really so. Many of us would think of Aconite or Sulphur. This may relieve temporarily, but it will not eradicate that tendency to take cold every time the child is exposed to a slight snow-storm. If I had that thing come up with me, I would give a few doses of Sepia. Either begin the case with Sepia or follow it up with Sepia; and those of you who are not familiar with Hering's *Guiding Symptoms*, if you will look over the given symptoms of laryngeal and bronchial symptoms, you will find Sepia there referred to. That is one of the coughs I have found very difficult to manage and almost impossible to prevent. Sepia will help you prevent many of them. There is no use in giving it in second decimal potency; it will leave you in the lurch every time. You will have to give some power in the drug—something that is adapted to the force of the disease; something that is equivalent to the onset of the attack. Exactly how strong that snow-storm was, or that peculiar atmospheric influence was—the force that was in it—I do not know; but it was enough to make the child sick, and you must use Sepia in sufficient force to cure your patient—just what force I am not quite certain. I use the highest I can get when I have hard cases.

One other point. My experience is that Sepia and all the rest of them, Pulsatilla, these alternate remedies do not sometimes give the expected results, and then fault is found with the remedy, that something is wrong with Sepia, something wrong with Pulsatilla. But no, the remedies are all right. This is what's the matter.

There are one or two other points which I wish to emphasize. You know we have, in a large number of remedies, cold, damp feet, sweaty feet. That is common to a number of remedies. Sepia has it also. But where you find it in Sepia, you will find hands and feet both perspiring.

Dr. Monroe: You mean Silicia has it also; you said Sepia.

Dr. Allen: Yes, and a dozen others. But it is found with the feet, head, neck, chest, and shoulders. Now, Sepia has that, but Sepia may have local perspiration over the chest and over the abdomen, on one thigh or on the side on which the patient lies. These

peculiar local perspirations—cold, damp, clammy—and these conditions, are almost certain to be remedied under a proper dose of Sepia.

Lizzie Gray Gutherz, M.D.: I only wish to add my voice to those who endorse this wonderful drug, and emphasize a few of the essayist's ideas. I do not think Sepia will replace a displaced uterus, but I do think it will do wonderfully good work in keeping it in its position, and assist to reduce the congestive condition of the uterus and its appendages, and it is certainly very valuable in all climatic conditions. In urinary troubles it fills its place in conjunction with Lycopodium. As Dr. Monroe says, the relaxation has a great deal to do with the condition of the uterus; it tones it up.

T. F. Allen, M.D.: I want to say one word in relation to the "comparisons," which have been made this afternoon, of Sepia. I have been very much interested during the last few years in looking up the relationship of Sepia, and in order to do that I have found it necessary to inquire into the nature of Sepia. Sepia, as you know, is an animal product; Sepia is not a poison. The animal throws out the circular part which gives the sepian mass in the water, which we gather as Sepia, in order to hide from its enemies in the water when attacked. It instantly makes the water inky black, and so enables the animal to escape. But this is not a poison; it is pure and simple carbon; nothing in the world but coal; absolutely inert as far as its crude condition is concerned. Hahnemann had supposed that the artist who used India ink made of Sepia became poisoned from contact with it, and that very likely led to this observation. I cannot compare Sepia with any animal poison, but I have confirmed Sepia as a vegetable and class it with other carbons, pure and simple carbons, which by their trituration develop different properties. This is something to think about in making comparisons. I have been very much interested lately in the chemical history of Lycopodium, and it has had a great influence upon me. Lycopodium is the only vegetable known in the whole world which takes up aluminum. I would suggest a comparison of Sepia with the carbon.

Dr. Monroe closed the discussion of his paper as follows: In regard to my comparison of Sepia with the other animal poisons, of course Dr. Allen and the rest of you understand I should not have attempted to make any such comparison upon any toxicological basis, but simply upon a clinical basis. I find I do not care how slow Sepia is or how long it takes to produce its effects or how mild they are, it gets there just the same eventually. I brought these comparisons in not so much to show the similarities but to suggest the differences. The paper was intended simply to be suggestive. If I should have followed the different avenues that suggested themselves to my mind, I would have read on until you would all have left the hall. And then, as to the Selenium, I think that should

have been brought in the comparison. I always think of that as exaggerated Sulphur. I cannot see any very marked differences in the drug, except that Selenium is Sulphur and more so, with an abject despair, uncompromising melancholy, that we find in no other drug in the Materia Medica, with an increased tendency to chronic troubles and a decreased tendency to convalescence.

MY BRYONIA DAY.

By Frank Kraft, M.D., Cleveland, Ohio.

It is a matter of experience with every closely-observing householder that certain domestic events happen at stated intervals, and with such a degree of regularity that, given one series, the observer is prepared to predict the succeeding series. Thus, when the clouds hang low and threatening, he is reasonably sure that ere long some itinerant artisan will thumb the electric bell in order to learn if there be any umbrellas to mend. If the amateur baseball nine shivers a pane of glass in the kitchen window, although at the moment of happening a glazier was not remembered to have been seen in that neighborhood for weeks or months preceding, yet, in a little while he will be on the scene with his sing-song of "Glass to put in!" This is true of snow-shovels and lawn-mowers; of the seedy individual who begs to put in the coal in the fall season, and of Uncle Remus with his *fin-de-siècle* cart and horse, who comes in the gentle spring to haul away the ashes. The church strawberry festival, the midsummer rainy-day picnic, and the oyster-supper, all come with the regularity of time itself—the one event treading sharply on the heels of its predecessor, and being in turn trodden on. If he be a country medical man, this observer, and the weather is too bad to put out a dog, raining and cold, mud shoe-mouth deep, he knows that somewhere, a half-dozen miles or more away, in some unsavory or non-paying neighborhood, some poor woman is getting ready to have him called out about two o'clock in the morning—verifying that Napoleonic aphorism of the two-o'clock-in-the-morning courage—because it takes much courage to avoid objurgating the weather, the profession of medicine, and perhaps, also, the unfortunate woman.

This medical man, if a Homœopath, has, in the course of a few years discovered that he gives his remedies very often in the same general way—on a scale of precedent and consequent; that if the first patient of the day required Bryonia, Bryonia will be very apt

to lead all day—that is to say, it will be in some form the trump card. If he has one case of confinement, so says one medical friend of mine, he will have another very shortly thereafter; in other words, his obstetric practice usually comes in pairs. When he awakes of a morning and hears the rain-drops patter on the roof, he says to himself: "This will be my Rhus day." If the day be bright and cold, with the wind blowing a gale, he looks to his Aconite. And so intuitively, or as an impressionist, as our eminent teacher and author, Timothy Field Allen, has called him, this doctor finds his fingers fingering the cork of a certain one or two bottles of his pocket and office case, dependent either on the weather or some other circumstance—a concomitance not set down in the books or taught from the college platform.

I have found myself doing this unscientific thing, when no one is more averse than myself to routine practice, or a practice not based wholly on the totality of symptoms. For a time I fought this inclination, ascribing it to laziness or indifference; but, in later years, I am glad to resort to it when business is a little hurried.

Professor Allen has said, that the physician in time falls into a way of prescribing almost as by intuition; but, in reality, because a glance at his patient, a moment or two of conversation, some trick of gesture or speech, his or her nationality, occupation, etc., rapidly stamp themselves in the prescriber's mind as a totality not to be ignored, and but a few medical questions are needed to complete the picture. Of course, this is not the rule of prescription, Homœopathically, nor any other way, but it goes far in the solution of the ever-present question, "What shall I give this patient?" And, really, what to the young medico, or the unobserving book-worm doctor, seems intuition or "luck," is naught but the crystallization of years of study of human nature, and its clinical application in his office or at the bedside.

When I began practicing, I chanced to alight in a section of country filled with swamps and sand-dunes. At this time, fresh from college, with the usual recent graduate's belief of containing within himself all that was worth knowing in medicine and allied sciences, I fell afoul of an epidemic of measles. My first case, instead of calling for Pulsatilla, or Sulphur, as I had been taught it would or should, persisted in calling for Bryonia. Other cases following also demanded, and of course received, Bryonia, but very much to my

fear that I was not doing my whole Homœopathic duty. I recognized that this could not be honest Homœopathic practice, unless I had hit upon what Hering, I think it is, calls the epidemic remedy. However, as the patients got well, there seemed no cause for complaint.

Then a season of whooping-cough followed, and before I was called to the first case, in anticipation of such employment, I looked carefully over my literary assets, found that Tartar emetic and Coccus cacti, and Drosera, Lachesis, and Zincum and many other remedies had usually been indicated, and from this quiver I could certainly select my Parthian arrow. But, to my amazement, Bryonia again reared its unwelcome, because I believed unhomœopathic, head, and throughout that epidemic, with the exception of a few doses of Sulphur, Bryonia governed the one hundred or more cases which fell to my lot that season.

When the first attack of "grip" came I was reading carefully everything that was being published in the east concerning this formidable epidemic, which was at that time "sneezing" its way into publicity, and noting especially the Homœopathic remedies used and recommended. Eupatorium perf. and Gelsemium seemed everywhere else the remedies, yet when the "grip" struck my bailiwick, with Eupatorium high and low in my pocket ready to do efficient battle, I found that my first prescription in a few cases was Allium cepa, which did no good whatever, and though my fingers itched to try the Eupatorium, I saw the handwriting on the wall, and gave Bryonia. To be brief, in the three epidemics which I followed in my country practice Bryonia was my friend, and I lost no case.

When I reached Cleveland one of the medical professors sent me to a case of what is there called winter cholera, telling me that Gelsemium and something else in alternation was the usual prescription in all such cases made and provided. You already anticipate that my familiar demon, Bryonia, got there and cured that case as it has a great many cases of winter cholera since that time.

How can this be explained? If I had any pet remedy in my case when I left my *alma mater*, it was Ipecac; for that was the first remedy I studied under my preceptor, and studied, indeed, as I have never since studied another. Of Bryonia I knew no more than I did of the other seventy-five or one hundred remedies I had heard lectures on. Yet of Ipecac I do not believe I have used a hundred doses

all told, while Bryonia is the bottle whose cork is always black and whose contents is at a low ebb. I have struggled honestly and long not to fall into a rut. I have studied other allied remedies more carefully. I have used very nearly every kind of repertory in the market. I have re-examined and restudied my written cases, expunging what appeared to point too plainly to my *bete noir*. I have refrained from asking innocent leading questions, but "still the villain (Bryonia) pursues me."

My preceptor had usually three or four bottles of Natrum mur. about his person, with the chance that all were empty at once when needed. Prof. J. T. Kent, I remember telling me, had a hard fight with Arsenicum; and it has occurred to me that perhaps I am not singular in *My Bryonia Day*, but that other practitioners have had and do have similar experiences with some one or two remedies as *their* key-notes.

In speaking with a brother-physician many years my senior, he admitted that his patients, too, had a fashion of coming to him in groups, according to the season of the year; and while he had never thought of it in that light before, he did remember that these groups usually also grouped themselves around one or two remedies. He recalled the instance of so many of his lady patients requiring Platina on two or three days for a persistent and very peculiar constipation of the bowel; that he went a little more minutely into the case, and discovered that they had all been members of a Teachers' Railway Excursion from his place (an interior Indiana town) to Niagara Falls.

After an overflow of the lowlands of a certain city, another good prescriber always found Natrum mur. indicated in very nearly every case arising out of the inundation; and I have myself followed a sewer-pipe laying with Natrum mur. the entire length of the street. Still, this will only account for a small part of the peculiarity of *My Bryonia Day*. May it be possible (not unlike the doctor who has attended one case of puerperal fever, and is therefore in danger of infecting all other of his obstetrical patients) that I am carrying the bacillus of Bryonia, and so thoroughly infect every case that comes to me that it becomes a Bryonia case? If all of my patients, or a great percentage of them, died, it might be argued that I am a crank on Bryonia, with a Bryonia hobby, and that I fitted my patients fo the remedy, instead of the reverse. But the Board of

Health records credit me with the usual Homœopathic percentage of mortality only; so that cannot be the solution.

I think it is well known that people of different nationalities require different medication—I mean, as a general remedy—one that governs the medical composition (the totality of symptoms) as the key-note governs the musical composition. If I am cast into a German or Dutch neighborhood where lard is used not alone in cooking, but for every other domestic exigency, from greasing the boots to greasing the hair, I look well to my Pulsatilla, and more especially is this true in the fall, in the "spare-rib" season. If there be a preacher's convention in town, remembering their alleged fondness for yellow-legged chickens and the other good things of life, I look carefully to my Lycopodium bottle. A Democratic convention does not differ much from a Republican convention, except as whisky differs from beer; Sulphuric acid helps us out on the one hand and Nux or Sulphur on the other. In pic-nic season, if the dear girls and ladies get caught in a shower—the usual accompaniment of the typical and classical pic-nic—and get their feet and ankles wet, I know Belladonna, like Mrs. Micawber, will not desert me.

If this practice, as herein outlined, could but be made practical, and applied to the several walks of life, how easy doctoring would become! Count Mattei, with his green and blue and yellow electricity, in his palmiest days, would be no comparison. Schüssler, with his *Shortened Therapy*, would stand but little show against *My Bryonia Day* style of prescribing. If it were possible, let us say, to treat every German with Pulsatilla, every Frenchman with Nux, the Englishman with Colchicum, or the Turk with Saw palmetto, what a medical revolution it would prove! Suppose we could be a little nicer in our distinctions, and treat people according to the State or city in which they reside, how, even with that addition to the original plan, the remedies would group themselves in twos and threes of remedies we would need to know, thus giving more time to devote to bacteriology and the doing of laparotomies. Then Philadelphia might require Bryonia, because of its reputed love of quiet and aversion to movement. Boston could be treated with Baryta carb., if the patient be a female, that being the old-maid remedy; or if male, Natrum mur. might be used isopathically to antidote the great ingestion of Attic salt. Cincinnati would need

Pulsatilla for bad effects from pork. St. Louis would call for Sulphur or Nux because of its breweries. Washington could safely be turned over to China, or perhaps that wouldn't be safe just now; let us say Cinchona, therefore, which usually antidotes "cold tea." New York ought to have something, and in a very low potency, too, to check its munificence and liberality in public benefactions, monuments and other States' physicians; but what that remedy is, no repertory in my possession discloses. Chicago would imperatively demand—she never asks—Lycopodium, not so much for its unbounded brain-work, nor, as Dr. Horace Packard intimated a day or two ago, because she is "fast," but because Lycopodium is good for gas and wind. It is evident, without carrying the attenuation of this idea any further, what a vista of usefulness is open to some inventive genius who will construct a Meisterschaft System, "Teaching How to Cure Folks in Ten Easy Lessons;" and I hereby waive all royalty on the idea.

Seriously, there must be some rule or law back of *My Bryonia Day*, but thus far I have failed to find it. I cannot recommend the plan, because I have no plan; for while I have mentioned a few glaring instances of the applicability of this scheme, in all the rest of my practice I have to "dig out" my remedy as Hahnemann recommends and teaches. Perhaps other and older heads, having met with a similar experience, may give us more light and bring us from darkness to light.

Discussion.

Wilson A. Smith, M.D., said that he did not believe Professor Kraft was really in earnest in what he said concerning Bryonia; and the speaker illustrated his point with an appropriate story, which was well received—and continuing, he said: I do not believe he had any such "Bryonia days," unless it was in the earlier days of his practice. There are some who use nothing but Aconite on certain days, and nothing but Sepia on others; but you have all had the same experience, and that was when you had only one case a day. Now, if there were Bryonia days, I would like some of our good brethren to get up here and tell us about some of their special days. But, seriously, I do not believe that there are such things as Bryonia days or Sepia days, any more than my friend, Prof. Kraft does. There are days when Nux vomica may be largely used. Bryonia is a colored man's remedy; I wonder where Dr. Kraft has been practicing.

Howard Crutcher, M.D.: In discussing the paper of Materia

Medica, by Dr. Kraft, I may seem a little out of place. There are some points, however, that it might be well to emphasize, even in a Homœopathic Convention. There is no such thing as a "Bryonia day;" that idea was not meant to be circulated by Dr. Kraft. One thing has been steadily, persistently, and systematically ignored by the medical profession for three thousand years—and that is the patient; and it has been done systematically, and I might say, maliciously, since the dawn of earliest history. Nowhere in medical history is the patient mentioned as the factor until the time of Samuel Hahnemann. What we are dealing with is not days nor weather, but sick people; not the liver—although it is an attractive target; nor stomachs, nor heads, nor heels, but sick people. It is a most difficult thing, absolutely impossible it seems, to get some physicians to appreciate that point. Now, long ago I found a patient taking a liver remedy, a bowel mixture, a sleep compound, a tonic, an appetizer, and one or two other things. She was complaining; the trouble was she had forgotten the kidneys. When leaving I was asked what I had prescribed? I said, "My dear sir, did it occur to you that the only thing I came down here to do was to cure that sick woman?" "Well, what did you give her? Did you leave anything to make her sleep?" "No." It seems absolutely impossible for the present composition of the human mind to lose sight of Materia Medica, and remember solely that we are dealing with sick people. Our sole duty, as therapeutists, is to prepare these pictures, fitting them for the niches wherein they belong. I know when I was a student in my preceptor's office, attending lectures, I cured more sick people than I was curing after graduating in medicine, and after considerable experience at the bedside. When I was a student I knew just enough, dared just enough to take the picture and prescribe for a man. After I got to be an M.D., I began prescribing at somebody, or rather at my own creation in the shape of a diagnosis, with corresponding results. It is the man or woman we have got to deal with all the time in disease. It is not so much typhoid fever—we know what the remedy is—as it is the man we should study. There is very little difference between Jones's typhoid fever and Smith's typhoid fever. The man and his trouble is what we are called upon to relieve.

THE REVIVAL IN THERAPEUTICS.

By William E. Leonard, M.D., Minneapolis, Minn.

The proud boast of Homœopathy, so truthfully made forty years ago, that it alone includes all that is reliable in therapeutics, and that, therefore, its practitioners are by all odds the most successful, is by no means as true as when first uttered. The times medical have changed, and I believe that the relation of Homœopathy to American medicine at least is somewhat changed. Or, in other words, because of the influence of our system of less medicine, the above statement is true. Cotemporary history of other schools of medicine, the success of many of their notable individual practitioners, as well as the evidence of the comparative statistics presented to this Congress, show a lessening difference in the mortality rates of the diverse schools.

This does not reflect upon the truth of the Homœopathic law or the integrity of its followers. It does not mean, as recent polemics would have the people believe, that "Similia" is a worn out fad, or that its disciples are being enticed into the enemy's lines or led into employing his methods. Such occurrences are to be noted here and there, but not as often as the "Internationals" would have us believe.

But it does mean *a revival of therapeutics* among medical men generally. It means that, in spite of numerous fads and novelties which have served to amuse the profession through the journals but which have deceived but few into their actual employment; in spite of the continued increase of excellent physiological preparations of digestive ferments and stomachics whereby even a sick alimentary tract is enabled to digest food and sustain life; and notwithstanding much waste of powder and shot against the hated Homœopathists, the text-books slowly but inevitably are incorporating smaller doses, and often unconsciously advocating medicines Homœopathic to the conditions described, and that thus, little by little, "a little leaven

leaveneth the whole lump." Rarely is the medicine thus Homœopathically recommended in this new practice chosen with sufficient accuracy to at all approach the "similimum." But even an imperfectly similar remedy, in small doses, if we believe Hahnemann's statement concerning the universality of the law, will hasten the cure.

Let me illustrate this statement by comparing the therapeutic portion of former with those of more recent works. Take up Ziemssen's *Encyclopædia of Medicine*, which was translated and published in 1875, as being the greatest compilation of practice of its generation. To be sure, its bare therapeutic hints smack greatly of the meagre faith in medicines held by the German in comparison with the American practitioner, as the following will illustrate. Speaking of the treatment of catarrhal pneumonia (vol. v., p. 230), Jurgensen considers the action of the medicines ordinarily used, *i.e.*, muriate of Soda and carbonate of Ammonia, very problematical. "The problem of diminishing the swelling of the mucous membrane and limiting its secretion will certainly never be solved by giving medicine . . . ." p. 733. "I never give Tartar emetic in divided doses, but a full dose of three-quarters of a grain, with eight to fifteen grains of powdered Ipecac."

His favorite method is to direct a small stream of water against the back of the head over the region of the medulla oblongata, and thus produce violent respiratory efforts. This he would do even in severe and late stages. Contrast this with the following in William Osler's *Principles and Practice of Medicine*, 1892 (p. 543): "If the disease comes on abruptly with high fever, minim or minim-and-a-half doses of the tincture of Aconite may be given. . . . . The pain, distressing symptoms, and the incessant cough often demand opium. . . . . If the child has increasing difficulty in getting up the mucus, an emetic may be necessary—either the wine of Ipecac or, if necessary, Tartar emetic. There is no necessity, however, to keep the child constantly nauseated."

Again, Ziemssen (vol. v., p. 609), in the treatment of phthisis, has absolutely nothing to offer in the way of drugs but Peruvian bark. Whereas, Prof. Osler (p. 255) says: "Under no circumstances is that priceless remedy, Quinine, so much abused as in the fever of tuberculosis. . . . . It is of little benefit in this type of fever." He advocates Antifebrin and Antipyrin, used cautiously,

and finds a place for Creasote, the hypophosphites, Arsenic, etc., which is something more than Ziemssen offers. This approach to Homœopathic methods is better shown in recent text-books, *e.g.*, Shoemaker's *Materia Medica and Therapeutics* (vol. ii., p. 732). Under *Lycopodium* we read: "A tincture of Lycopodium has been made by subjecting the powder to prolonged trituration with the sugar of milk, after which it readily dissolves in alcohol. This preparation, in half-drachm doses, is of value in incontinence of urine among adults and flatulent dyspepsia, attended by a copious deposit of uric acid in the urine." This is remarkable for an "inert powder."

Again, under *Aconite* (p. 399): "Its control over the circulation places Aconite in the first rank in the fever process, but in order to get the best results it should be given in fractional doses (every ten, fifteen, or twenty minutes give a teaspoonful of water from a tumbler in which a few minims of the tincture have been dropped). Invaluable in the treatment of the ephemeral fevers of childhood and hyperpyrexia attendant upon the exanthemata. In adults the results are also very positive, so that Aconite has almost entirely taken the place of the lancet in antiphlogistic treatment."

In Cerna's *Notes on the Newer Remedies* (1893, p. 44) under *Cactus grand.*, we learn: "The plant has been successfully employed as a stimulant in diseases of the heart, especially myocarditis and valvular lesions." Upon this Homœopathic action of cactus is based the extensive use of "Cactine pellets," each containing $\frac{1}{100}$ of a grain of the active alkaloid of cactus.

Many other instances of imitation, without credit, might be given, as evidencing a decrease in the therapeutic agnosticism of a few years since. The growth of specialties in American medicine has indirectly contributed to this revival in therapeutics. Those who had lost faith in all but "tonics and alteratives," and who preferred to increase their fees and volume of business by treating affections for which people demand only mechanical and palliative treatment, have deserted the field to the general practitioner. The latter finds himself in sharp competition with Homœopathists for general and family practice, and is compelled to look more closely into specific medication.

This also is one of the causes for the undoubted revival of experimentation and research in Old-School ranks. Now-a-days new drugs

constantly claim attention. Some of them are confessedly taken up because we Homœopathists use them, while most of them are laboratory products brought out by the pharmacists, and apparently of only slight range in disease. By the way, these manufacturing chemists stand between the Old-School profession and the people in much the same relation as the elders and vestrymen of the churches to the pastor and the people, it being very noticeable that the reforms come from them because of popular pressure, rather than from the cloth or profession. In other words, these manufacturers have appreciated the popular demand for less medicine, and refined doses, and have forced physicians to use them.

Among these laboratory products are the various alkaline compounds, the innumerable alkaloids, glucosides and vegetable derivatives and these are increasing so rapidly that, as quoted in Cerna's (above-mentioned) preface, "if each compound is to be thoroughly studied by the physiologists, the result would hardly be contained in the world's literature." If old medicine is earnestly thus striving to increase its drug list in a practical way, if it is really striving to find more "specifics" for disease, it matters not what explanation is made of their successful action when found, whether by substitution or, as we believe, in many instances, under the law of "similia." The fact remains that a real advance has been made in therapeutics. Moreover, in many a large American city, are to be found medical men perfectly "regular" in all their affiliations who slyly and quietly, by an occasional meeting in counsel, or by at still rarer intervals chatting in their library or asking him to look at some member of their family, are weighing the methods of their Homœopathic neighbor, until finally, to use more Anglo-Saxon, they are prepared to steal his prestige and business by doing or pretending to do as he does.

Again, many intelligent people, having once seen the benefits of smaller doses of medicine, and being naturally conservative, and with full confidence in their family physician, demand from that physician more common sense and less medicine, although, perhaps, never actually coming from Homœopathy. Such patrons do not go over as rapidly to the "silent majority" as formerly and hence help reduce the disparity in the results of different schools of medicine. And these facts, being only straws perhaps, all point to the current now setting in towards the revival in therapeutics. This flow of

faith in drugs, as contrasted with the ebb-time of disbelief of a few years ago, is an omen of no small import in the history of therapeutics, and especially to our school as proud conservators of the only science of therapeutics. It means that, if we as a school, would keep in the van of drug study and practical use, if we would supplement the brilliant pictures of such drugs as *Nux* and *Pulsatilla*, first outlined by Hahnemann, with others as useful, and teach the medical world more means of cure, we must show more zeal in drug study than in the years past. We, at least some of us, must for a time depart from those mechanical and surgical methods which may mean more ready cash for the effort made, and do something to establish new drugs or confirm old ones. If we do not thus add to our special and peculiar Homœopathic literature, which is at present in fact only a small proportion of the great bulk of medical literature, we shall drift on into empiricism and nothingness and be deservedly mentioned as false to the trust imposed upon us by Hahnemann. There is great need of a *revival of therapeutics* in Homœopathic as well as Old-School medicine.

Discussion.

H. W. Westover, M.D.: There is very little I can add to what Dr. Leonard has stated. It certainly is true that there has been a very marked and decided advance in therapeutics among the physicians of the dominant school, and this, to a certain extent, has brought about a better comparison of results between the members of the Homœopathic School and the non-Homœopathic. This, I think, has been very largely due to the Homœopathic physicians. It has made a demand for a more conservative treatment, but still that is a nearer approach to results which we find among the Homœopaths and non-Homœopaths. I think if we will scan the situation carefully and honestly, look at things as they are, we will see that, to a very large extent, among the rank and file of practitioners of the Homœopathic art there has been a letting down in the zeal with which they have studied the Materia Medica. This is an ultimate fact and one to which we should not shut our eyes. If we are going to maintain the prestige which the Homœopathic School has held in the past, if we are going to do as much in the treatment of disease as our knowledge will permit us to do, if we are going to do the greatest good to the greatest number, if we expect to lead the van, we must refer to old methods, old rules, and not neglect this Materia Medica, which has been the means of our success in the years that are gone. Let us not forget these things. Let us not

forget old and tried friends for new ones. There is far too great a tendency among Homœopathic practitioners to wander after strange gods, to worship Baal, and that I certainly think we should decry. Let us remember that Pyrene and Antipyrene, and all these things are strange gods to which the Homœopath should not bow down. I live in a region far distant from this, in Missouri. Travelling representatives of the manufacturing chemists, with their proprietary articles, go to these cities, villages or cross-roads, where there are only two or three physicians, to introduce their wares. They come into my office every week. They see by my sign that I am a Homœopathic physician. Would they not give me the go-by if they did not receive encouragement from Homœopathic physicians from the Atlantic coast to the Pacific Ocean? These are facts; we cannot shut our eyes to them, and we should do all we can to stand firm in advocating the true principles of Homœopathy, which are as true to-day as they were in the days of Hahnemann, or when Hering and Dunham taught those great principles. We should have a much more perfect Materia Medica to-day, more thoroughly proven. We have all the added experience of years from which we can receive encouragement, instruction and improvement. I adjure you at all times to con your Materia Medica. Let there be a revival of therapeutics. How are we to do it? Not simply by prescribing on isolated symptoms here and there, but, as Dr. Crutcher said, let us prescribe for the patient, the sick man. Don't shoot at a man's liver or kidneys or stomach, but take the totality of his symptoms. Let us remember that it is by carefully conning our Materia Medica, by carefully studying the patient—the sick person, by looking at the image which that person presents, and endeavoring to secure a corresponding image from our list of remedies, that we can secure success, and can go on from conquering to conquer, so that our last days will be better than our first days. It is only by doing this that we can secure a revival in therapeutics, and I think if we will be zealous, if we see the light we have and not decry our Materia Medica, we will show to the world the great benefits which Homœopathy placed before it. It is very popular in these days to talk about being a live practitioner and all that, but we should not forget there is a vast amount of good stored up in these records which have come down to us from the past, and it is our duty to respect them and utilize what we have. Let us remember that everything is not better than that which has been useful in the past. We should discriminate between that which is good and that which is bad, and use the great mass of curative agents with which we are surrounded and with which we should be familiar, and in this way we can bring about a revival in therapeutics which will be a credit to the Homœopathic system of medicine and confer a great boon and blessing upon humanity.

J. H. Henry, M.D.: Some forty years ago, when a student in the Homœopathic College in Philadelphia, under Hering and Kitchen and Matthews and others, I was taught what I considered the true principles of Homœopathy. We had no such a thing as Hydroline. We were confined to the great law *Similia similibus curantur*, and under that law Homœopathists were sent out as missionaries over the country. We met yellow fever, cholera, scarlet fever, pneumonia, and we were the victors. We were the victors because we dealt not in medicines that were made from fluid extracts. We dealt in pure Homœopathic remedies, and we treated diseases with them. Take, for instance, aconite. We have no such thing in this country as a good Homœopathic preparation of Aconite, unless it comes from the pharmacies of Germany. In the treatment of fever with the present Aconite we are not favored with the pure drug used by Homœopathic physicians twenty years ago. Take Belladonna and all our old standard remedies that were handed down to us by the earlier Homœopaths. We went forth with our little cases in our pockets, treated patients, and were successful. Now I write to my pharmacist to get Aconite, and I get a muddy, dirty tincture. I write for Bryonia and I get a dark tincture. I get no longer the beautiful yellow tincture. The fault is not always so much in the prescriber as it is in the impurity of our drugs. Unless we pay more attention to the purity of our drugs, the destiny of Homœopathy is sealed. This paper is one that I am glad to hear, because it treats of the past, the present and the future of Homœopathy.

PRACTICAL PSYCHOLOGY IN ITS RELATION TO PATHOGENESY.

By Eldridge C. Price, M.D., Baltimore, Md.

We are impressed by the fact that in the growth and development of medicine, science, with ever-increasing insistence, demands, that for the purpose of successfully relieving sickness, each case of disease be considered as an individual. This suggestion that the "personal equation" shall be taken into account by the physician was first made by Samuel Hahnemann. And to-day, by every educated practitioner, whatever be his creed, the necessity of individualizing to a greater or less extent, is acknowledged. Of necessity, the believer in Homœopathy must accept the individuality of the human being as he accepts the major and minor pathogenetic details which constitute the personality of the drug which he prescribes. Or, to reverse it, he must recognize that each human organism is a distinct entity with special characteristics before he can hope to gain a clear understanding of the power of the given drug to modify mental and physical activity when used primarily in the field of pathogenesy, and secondarily in therapeutics.

Another suggestion made by Hahnemann was, that the symptoms of the nervous system, especially those due to temperament, those which go to make up the individuality of the patient, should be given mature consideration before prescribing a drug. The older school of medicine has not yet consented to adopt this view; the believer in Homœopathy is yet alone in his acceptance of this profound truth, this truth which is on the border-land of an approximately perfect system of therapeutics.

When Hahnemann made this last suggestion he was more seriously handicapped by an imperfect pathogenesy of drugs than are we of the present day; but even with the scant material he then possessed he could see that the truth of such a postulate was a logical necessity, or there was no such thing as a law of similars. On this also de-

pended the truth of the power of infinitesimally subdivided matter. The great formulator saw (even with his slender stock of knowledge of psychology) that if through the special senses material changes could be produced in the gross functions and even structure of the organism called man, by mere ideas or intangible impressions, then there was no mystery in the effect produced by infinitesimally subdivided matter when introduced into this organism.

We are here on the borders of an almost unexplored country; but it is the field in which Homœopathy has had some of its greatest triumphs, and in which it must look for its fullest justification in the future. Up to the present time the Homœopathic branch of the medical profession has but dabbled in the waters of the great ocean of Homœopathy; none have been able to venture boldly in, because none have known enough to swim.

To be able to practice Homœopathy according to the ideal of Hahnemann, the ideal of the artist, in accordance with science, three things we now lack are necessary: first, a thorough knowledge of practical psychology; second, a Materia Medica thoroughly proven upon healthy experimenters; and third, thorough correlated knowledge of pathogenesy and practical psychology.

A Materia Medica thoroughly proven upon the healthy is neither a thing of the past nor of the present, but it is a possibility of the future. It is one of the ultimate necessities of Homœopathy, but the need for it is not so great as the need for a knowledge of psychology practically applied to the pathogenetic material, not only of the future, but applied to the comparatively little reliable material already in our possession. For intelligent and profitable study of drug effects, familiarity with such knowledge is necessary. This the scientific physician needs, and until he becomes possessed of it medicine will continue to be what it is now, largely an empirical art. It is true that some scientific cures have been made in accord with the strictest requirements of pre-vision, but these cures are exceptional. The realization of the scientist's ideal should reverse this and make failures the exception.

"But," it may be objected, "this state of affairs is not possible." We have never claimed that it is possible; we have only said that this reduction of the ideal to the real must be (as it is) the tendency of Homœopathy, if we expect to progress; if we desire to fulfil the most liberal possibilities of the law of similars. Whether it can be

accomplished remains for the future to decide. Of course, a perfect system of medicine is ideal, but the best practical results are always attained through the inspiration of high ideals.

Let us examine into this relationship which we claim should exist between psychology and pathogenesy.

Originally, psychology meant that which treated of the human soul. As thought-evolution progressed, the term was modified into science of the soul; that is, correct knowledge of all manifestations supposedly of the functions of the soul. More latterly, students in this field discovered that such a definition was ambiguous, besides involving the introduction of certain theological opinions, and hence, as mind may be credited with a responsibility for all results which have been considered "functions of the soul," psychology now comes to mean "mental philosophy, the science of the mind." Therefore, a study of psychology involves not a study of mental conditions alone, but it includes an examination into the effect of mind upon matter, and also the causes which produce mental effects, the action of matter upon mind.

A knowledge of psychology is useful in many ways, but for a proper understanding of the meaning of supposable effects of drugs upon the healthy human system, it is a necessity.

In this preparatory work upon which the foundation of the therapeutics of the future must be laid, anthropology is the starting-point, the study of man considered from an ethnological standpoint. Herein racial features should be considered, with their differences of physical development, qualifications, adaptability to environment, together with mental characteristics, etc. Next should be considered the subject of ethology or character in its various extremes, and in its various intermediate phases. The several mental conditions known as emotions, should be studied and carefully analyzed, examining into the relation of these emotions to what is commonly known as temperament. Temperament should then be investigated in its relation to the physical body, its growth, development and appearance. Then again, our steps should be retracted to the extent of analyzing the various mental attitudes which enter into the constitution of each accepted temperament. The question as to whether there is such a thing as temperament should also be examined. Having carefully surveyed these various fields, the investigator should then proceed to examine into the effect of physical con-

ditions, environment, perversions of local functions of organism, etc., upon the mind.

"Man's greatest study is man," does not apply alone to the body, but it applies equally to the study of that which constitutes the *ego*, the mental characteristics, the expressions which originate character, which are founded upon character, which form a part of character, which *are* character. Man is not all mind, nor is he all body; he is a combination more or less equally balanced, of the two.

Rarely do two witnesses give perfectly concordant testimony upon a subject with which they should be equally familiar. "Point of view" is largely responsible for the discrepancies, as no two individuals can occupy precisely the same mental or physical position together; but inexpert observation and carelessness of expression are also large factors of the discordant testimony. An examination of the reliability of human testimony, therefore, should also enter into this application of psychology to pathogenesy. Herein comes the critical study of the superstitions of mankind, beginning with the fetich, extending to amulets, talismans and charms, the king's touch, and ending with mesmerism which has been reclaimed by science under the name of hypnotism. Objectivity and subjectivity should both be carefully considered.

Having thus systematically laid the foundation for scientific scrutiny of human testimony on the subject of drug action, we are then ready to begin the study of pathogenesy as experts, and not till then. I have more than once called attention to the fact that because of this lack of preliminary education in psychology, our Materia Medica has become overcrowded with material that is absolutely valueless, and (deplorable fact!) until the necessity of this preliminary preparation is fully recognized, and has become a part of those who are apparently inexhaustible fountains of symptomatic details, the flood of inaccuracies will continue to inundate the profession.

It may be objected that much good, as clearly stated, has been done by the application of what the profession has interpreted as the Homœopathic relationship between drug effects and disease. This may safely be admitted and yet the fact remain, that such good results have been secured in *spite* of our collection of alleged pathogenetic details, not because of it. There is no stronger proof of the

truth of the principle of similars, that it is a law, than the very fact that the profession has been able to apply Homœopathy to the cure of the sick with so defective a symptomatology.

But to return from our diversion. After having learned something of the inter-relationships of mental and physical influences, of the effects of mind upon matter and of matter upon mind, in fine, having learned how to weigh human testimony, we are prepared to apply the results of our investigation to the study of pathogenesy. From our study we will be possessed of some valuable facts. First, should we make experiments with drugs upon the healthy, we will know enough to select persons in at least moderately good health, and we will also know enough not to select persons who are under either mental or physical strain, *e.g.*, medical students, or overworked clerks; nor will we select habitual users of drugs, such as tobacco, alcohol in any form, tea, coffee or spices, all of which substances, as we know, produce more or less deviation from the normal health of the user. In short, we will secure for our experimenters persons as nearly normal in health and as little addicted to harmful habits, as possible. When we come to examine the sources of our symptomatology, we will know enough to reject many details which students not trained to exact thought might accept, *e.g.*, catarrhal symptoms which have been recorded in cold, damp weather, by provers subject to chronic catarrh, bowel symptoms recorded by those who are subject to frequent attacks of indigestion and diarrhœa, or symptoms recorded by those taking two or more drugs at the same time, or symptoms recorded by those under treatment for diseased conditions, or symptoms noted by those under intense mental excitement, or temperamental symptoms which are congruent with the normal condition of the experimenter. And we will also know enough to reject *in toto*, or we will subject to the severest scrutiny, all recorded experiments which are not preceded by such a conscientious health-record as a knowledge of psychology can alone give.

Herein, therefore, is the relation between practical psychology and pathogenesy, that without understanding mankind through psychic manifestations, it is impossible to disentangle reliable details of drug-effects from the so-called pathogenetic records extant; and it is equally impossible to make scientific tests of the effects of drugs upon the healthy in the future; it therefore behooves all who intend making a study of drug-effects, to first investigate the field of practical psychol-

ogy, and especially that department which relates to the fallibility of human testimony. In fact every practitioner of Homœopathy who is a *believer* in the *law* of similars, who can appreciate the relative scientific value of *a priori* Homœopathy and *a posteriori* Homœopathy, and who is convinced that the medicine of science has a greater *practical* value than the medicine of experience—every such thinker should turn his attention to a study of this subject.

In the past, the success of Homœopathy as a practical system of medicine depended upon the success of the practitioners in curing the sick. Enough practical believers in the law were found to satisfy the demands of the people; and with the people, Homœopathy to-day stands a recognized principle. We have met the demands of the past, and Homœopathy stands in the present as a great a success as this stupendous Columbian Exhibition; but we are on the verge of a future, a future with demands far more exacting than were those of the past. Our claims have been submitted to the untutored mind of an inexpert public; now we come to have these claims analyzed by the tutored mind of the expert son of science, specialism. We must and we will stand the test; the Homœopathic relationship of drug-effects to diseased conditions will be demonstrated a law—but the demonstration will not rest upon clinical observations (they are but corroborative evidence); it will depend upon the value of our pathogenetic material, and the purity and reliability of this material will in turn depend upon the understanding of practical psychology in its relation to experimental drug tests upon the healthy.

In conclusion, we are justified in submitting, that as there is no method of finding undoubted effects of drugs except by experiments upon the healthy, and as these effects can only be discovered after a careful study of the individuals upon whom the experiments are made (as to their normal mental and physical condition in all the varied manifestation of function), and as these details can only be understood after a study of psychology—therefore it becomes obvious that the only way to correctly, understandingly, and profitably study drug action, is in the light of practical psychology. And further, as the demonstration of the truth of the law of similars depends upon a pure pathogenesy, so, recognizing Homœopathy as a law of nature, we submit, that to fully understand this law of nature, a knowledge of psychology is the student's necessity.

Discussion.

T. S. Hoyne, M.D.: I did not hear all the paper, but heard enough to say that as yet we know nothing about psychology. No two drugs act precisely alike; there are no two exactly alike in symptomatology. There are no two persons exactly alike, and the proving of a drug upon two individuals will produce more or less different symptoms. Hahnemann informs us how we are to make these provings. He tells us we should select persons who are in a state of health; persons who, during that time, refrain from spiced food, as the Doctor just remarked—but Hahnemann nowhere tells us that we should refrain from tobacco. No German ever stopped the use of tobacco during provings; they are all smokers. No physician told them to stop the use of beer; they have all been great users of beer. Now I claim, if a healthy man who is using tobacco or beer stops that habit, he will develop symptoms at once. It is a thing he is accustomed to, and he may as well stop eating at once. When we were proving a drug, we did not order the prover to stop—he kept right on. So you can make a proving of tobacco, a potency of it in a tobacco-user, and I will get symptoms from it. If we are to obtain provers that are in perfect health, and who use neither tobacco, coffee, tea, onions, or other things of that sort, we will find no provers at all. In fact it is very difficult to find persons who would fulfill the conditions laid down by the Doctor. I want to say one thing about medical students, as I have had a great deal to do with them as provers of medicine. If the class do not know what effects they will receive from the remedy, they make the best provers in the world. Take a class of twenty, and you will find that the symptoms will correspond more or less all through the list. Their symptoms come from their imaginations and from their habits.

A. L. Monroe, M.D.: As to the psychological element to be considered in therapeutics, that is a phase of our double-sided prescriptions which is equally important, as its complement, I think to many. Of course that tendency is overcome with Homœopathic physicians to a great extent by their being forced to study the mental symptoms that come from the drug. But a great many physicians treat a human being as though they were mending a watch or something of that sort, simply a machine. As we know and believe all human organisms are psychologically and physically, the same; yet no one ever knew a man with a humpback that did not have a hump mind somewhere. You never saw a man with a halt in his gait that did not have a halt in his mind somewhere. These symptoms confirm each other and complement each other, and in certain physical conditions we are bound to have certain mental symptoms. Another thing, the very question of psychology and its practical application in prescribing drugs, goes a long way towards explaining our advance of the Allopaths. We builded better than we knew.

We know that a certain drug will cure sleeplessness that is caused by grief. We are told that a certain other drug will cure sleeplessness caused by joy. Is there any one who can tell us why one cures the sleeplessness from joy and the other the sleeplessness from grief? It is impossible to put the material phases upon our prescriptions, and so it is that we cannot ignore or ridicule the psychological study of our work.

T. F. Allen, M.D.: There is a great deal to be said on this subject. I am extremely gratified with this paper. I did not know what ground Dr. Price would take, but it certainly seems to me a matter of the highest importance, and he has struck the right note. I wish all our medical students were compelled to study psychology the first year as a preliminary course before studying medicine, just as we teach our Normal School teachers psychology that they may better understand the child. We can all exercise a good influence not only in proving drugs but in recording the effects of drugs upon patients. Some of us enthusiasts are inclined to attribute the cure of the patient too much to the drug or medicine. In my younger days I was called to treat a case that had been going on three or four weeks of hæmorrhage. Nothing would stop the constant spitting of blood. I was called in as a kind of experiment to see what could be done. I made up my mind from the symptoms of the patient that Arnica ought to cure that patient, and I put up three powders and laid them on a shelf by the bedside, with instructions to take at intervals of two hours and take nothing else until I came back. After twelve hours I visited the patient, and she had not spit a mouthful of blood since my visit, and not a particle of blood was expectorated after that time. I watched the patient four or five years, and there those doses of Arnica remained, and they were never taken. It was a great disappointment to me. If those powders had been taken you would all have heard of it as a wonderful cure. I find myself more and more inclined to doubt my senses. I want to verify them over and over. This matter of proving drugs may not be a matter of such general interest. Some of us must do the work, and I like to see men, these skeptical men who like to verify these things, be sure they are right. There is no better work done than is accomplished by the skepticism of the Baltimore Club of which Dr. Price is the leading spirit, I believe. It is a splendid work, and we need it if our Materia Medica is to be regenerated. Such skepticism does not interfere with the success of Homœopathy. It will only give it a better and truer foundation. That we ought to be skeptical goes without saying, because we cannot help believing Homœopathy. Professor Hoyne said that it was his observation that a class of medical students make the best provers in the world; I beg to differ with the doctor. Dr. Wesselhoeft, of Boston, tried sugar of milk with his provers, and he was well situated, having

both men and women students. He found that those students developed most remarkable results from the admistration of the Sac. lac.; that they would come to him with the most wonderful provings. They naturally will seek to interest their professor, and in this way will try to please him by making statements as to the symptoms. There is psychology for you with a vengeance. The best provers I can find are impecunious young doctors waiting for patients.

Dr. Hoyne: But these are medical students.

Dr. Allen: I mean, after they pass out from under the Professor.

Dr. Bowen, of Indiana: Dr. Allen, did you assure that woman that you would cure that hæmorrhage?

Dr. Allen: It was a man. I did not tell him that I would cure him.

Dr. Bowen: It was not a psychological cure?

Dr. Allen: They asked me what I thought of the case, and I said I really did not know. These powders seemed to me the thing, and I said I would do the best I could.

Dr. Price, in closing the discussion on his paper said: It has been stated that we know little or nothing of psychology. That we should study it. But it happens we do know something of psychology. Spencer and Wibeaux have worked in that field. If we would study the standard works on psychology, we would all find it would be of great benefit in Materia Medica. We know that if an individual does not know anything about his normal condition, it is impossible for him to tell, when he takes a drug, what manifestations appear after taking that drug. There is not one man in a hundred that can tell you how he felt yesterday or ten minutes ago. That is why, of course, the counter-test of sugar of milk is used to get at the normal condition of the patient, then, when he takes the drug all those symptoms are eliminated.

Now, there is another point about Materia Medica that we should get right, and that is, in the practical application of the study of psychology. There has been carelessness in medical provings, and the original compiler has allowed error to slip in. If the work had been done by practical psychologists the mistakes never would have occurred.

Now, so far as the German not stopping the use of tobacco in provings, that don't make it right. Tobacco is one of our most powerful poisons, and no doubt that is one reason why, probably, all our old German practitioners gave so many symptoms that were unreliable, because they were mixed up with tobacco effect. It goes without saying, that a man not specially under the influence of a drug of any kind, will get effects from the drug he is attempting to prove. Now, if you will refer to some of the standard works, some of the symp-

toms referred to in the *Encyclopædia of Drug Pathogenesy*, or Allen's *Encyclopædia*, you will find twenty records of experiments with one drug, in which every prover manifested the same symptoms, unless he had headache or vertigo. Take any record of twenty or more provers, or even less, and I do not think you can find any one symptom that has run through every record of the symptom that is characteristic of that individual drug. It may be the symptom that is characteristic of the local action of the drug, or any other foreign substance upon the stomach, or something of that kind, but you will always find it is especially characteristic of that one drug.

PRIMARY AND SECONDARY SYMPTOMS; OR THE OPPOSITE ACTION OF LARGE AND SMALL DOSES.

By Charles Mohr, M.D., Philadelphia, Pa.

Much confusion exists among medical men for want of a proper comprehension of our subject; and false claims as to principles of selection and the *modus operandi* of cures are often made when primary and secondary symptoms of drugs are used as guides in determining the size of the dose.

This is not strange, however, since the terms primary and secondary, as applied to drug-action, are susceptible of different interpretations, and are used with different significations by different authors.

Of the pictures of primary and secondary effects of drugs which we find in the works of Old-School writers, and which have been made the basis of the "law of the dose" by some writers of the Homœopathic School, I quite agree with the late Dr. Dunham's estimate, that "they are composite pictures made up from a variety of observations on patients and from cases of poisoning, and bear no more resemblance to a pathogenesis on a single individual than the composition of an artist which has the mountains of Ecuador covered with the forests of Oregon and decked with the flowers of Java presents to a faithful landscape from nature."

Let me rehearse what the writers of the Homœopathic School have said concerning the subject under consideration.

Hahnemann, in his essay, "Suggestions for Ascertaining the Curative Powers of Drugs," published in 1796, and which you can read in the *Lesser Writings*, says: "Most medicines have more than one action; the first a *direct* action, which generally changes into the second (which I call the *indirect* secondary action). The latter is generally a state exactly the opposite of the former. In this way most vegetables act." He illustrates his meaning thus: "Under

Opium a fearless elevation of spirit, a sensation of strength and high courage, an imaginative gaiety are part of the direct primary action of a moderate dose on the system; but after the lapse of eight or twelve hours an opposite state sets in, the indirect secondary action, and there ensue relaxation, dejection, diffidence, peevishness, loss of memory, discomfort, fear."

It must be noted here, however, that Hahnemann admitted qualifications as to his general statement as to the opposite primary and secondary action of medicines and specified metals and minerals which "continue their primary action uninterruptedly, of the same kind, though always diminishing in degree, until after some time no trace of their action can be detected, and the natural condition of the organism is restored."

In the preface of the *Fragmenta*, published in 1805, Hahnemann further says: "Simple drugs produce in the healthy body symptoms peculiar to themselves, but not all at once, nor in one and the same series, nor all in each experimenter. . . . .

A certain drug evokes some symptoms earlier and others later, which are somewhat opposed and dissimilar to each other; indeed, may be diametrically opposed. I call the former primary, or of the first order, and the latter secondary, or of the second order.

For each individual drug has a peculiar and definite period of action in the human body, longer or shorter, and when this has passed, all the symptoms produced by the drug cease together.

Of the drugs, therefore, the effects of which pass over in a brief space of time, the *primary* symptoms appear and disappear within a few hours. After these the secondary appear and as quickly disappear. But the exact hour in which any symptom may be wont to show itself cannot be positively determined, partly because of the diverse nature of men, partly because of different doses.

I have observed some drugs the course of whose effects consisted in two, three, or more paroxysms, comprising both kinds of symptoms, both the *primary* and the *secondary;* the former, indeed, as I have stated in general terms, appeared *first* and the latter *second.* And sometimes it seems to me I have seen symptoms of a kind of *third* order.

Under the action of moderate or small doses, the symptoms of the first order came chiefly to view; less frequently those of the second order. I have chiefly preserved the former, as most suitable to the medical art and most worthy to be known."

To illustrate his views he prefixed or appended to the symptomatology of the drugs mentioned in the *Fragmenta* the following remarks:

Under *Aconite:* "Through the whole course of action of this plant, its effects of the first and second order were repeated in short paroxysms two, three or four times before the whole effect ceased. These effects were as follows:

Coldness of the whole body and dry internal heat; chilliness; sense of heat, first in the hands, then in the whole body, especially in the thorax, without sensible external heat.

Alternating paroxysms (during the third, fourth and fifth hours), general sense of heat, with red cheeks and headache, worse on moving the eyeballs upward and laterally; then shivering of the whole body, with red cheeks and hot head; then shivering and lachrymation, with pressing headache and red cheeks."

Under *Chamomilla:* "The course of its action is run in paroxysms of several hours' duration, comprising symptoms of each order, free spaces or remissions being interjected, so, nevertheless, that in the earlier paroxysms the symptoms of the first order; in the later, those of the second order, predominate."

Under *Ignatia:* "Inconstancy, impatience, vacillation, quarrelsomeness, wonderful mutability of disposition—now prone to laughter, now to tears. These mental symptoms are wont to be repeated at intervals of three or four hours."

Commenting on these quotations from Hahnemann, Dr. Carroll Dunham has truly said: "In his definition of primary and secondary symptoms, Hahnemann blended the elements of time and of causation or nature (viz., that these classes were opposed in their nature). The secondary symptoms were not an independent series, but were secondary by virtue of their relation of opposition in nature to a series of preceding symptoms."

Hahnemann pointed out very clearly, however, that there are symptoms in every proving to which there can be no symptoms of an opposite nature. He says: "Our organism always bestirs itself to set up in opposition to the first drug-effect the opposite condition, *if such a condition can exist.*" In other words, such symptoms as in their nature did not admit of an opposite condition (as, for example, pain, cutaneous eruptions, etc.) could not be called *primary*, because, in the nature of things, they could not be followed by an

opposite class of symptoms; nor could they be called *secondary*, because, in the nature of things, they could not have been preceded by an opposite series which could stand to them in the relation of primary symptoms.

Hahnemann also recognized symptoms occurring occasionally which he denominated contradictory, which were not *secondary*, but how to distinguish them from the secondary symptoms we are not told. In the *Organon* he gives instances of what he regards as secondary symptoms, viz.: "The gayety which follows the use of coffee is a *primary* symptom; the subsequent drowsiness and lassitude are *secondary* symptoms. The sleep which follows Opium is a *primary*, and the subsequent insomnia a *secondary* symptom. The purging of cathartics is a *primary*, and the subsequent constipation a *secondary* symptom. The constipation of Opium is a *primary*, and the subsequent diarrhœa a *secondary* symptom."

According to the rules laid down in the *Organon*, we are to use the *primary* symptoms in prescribing, never the *secondary*.

In the *Materia Medica Pura*, however, we find Hahnemann to deviate from his definitions and illustrations in the *Organon*. In the preface to *Belladonna* he says: "There is no known drug of long action which expresses itself in so manifold (two and three-fold) alternate conditions. . . . Of *none* of these alternate conditions (Wechselwirkungen) can it be said that they are beyond the primary action." The symptoms referred to are:

Contracted pupils and dilated pupils.

Abdominal pains, compelling to bend backward and to sit still; to move forward, and not admitting of motion.

Suppressed stool and urine, and involuntary stool and micturition, and constant tenesmus.

Sleeplessness and deep slumber.

In the preface to Nux vomica, Hahnemann says: "The symptoms of a single dose of Nux vomica are wont to recur several days in succession at the same time of day, even at the same hour, or every other day. Hence the usefulness of this drug in some typical diseases when the symptoms otherwise correspond. Besides this periodicity of the symptoms, and besides the alternation of heat and cold, there follow also upon one another, here and there (as is the case also with other drugs), symptoms which differ very much from one another, and *appear to be opposed to each other*, although they

all belong to the primary action of the drug. We call these *alternate actions* (Wechselwirkungen)."

Other Nux vomica symptoms referred to, are:

Anorexia and great appetite.

Constipation with tenesmus, and diarrhœa with desire and tenesmus.

Discharge of mucus from the nose, and dry obstruction of the nose.

Dr. C. Hering, in 1844, rejected Hahnemann's explanation of primary and secondary symptoms, but admitted that there are in every proving symptoms which appear early and late, and although they may appear opposed to each other, they are all to be made the basis of prescriptions. Indeed, he says the longer lasting, more permanent and more opposed the later symptoms are to the earlier, the more useful they are in practice. He declares that "all symptoms which arise in provings of the higher potencies are similar to the later effects of the lower or so-called stronger doses, and are not like the *first* effects of strong doses"—and adds that the great characteristics of remedies accompany both the earlier and later symptoms, *e.g.*, the *burning* of arsenic."

Hering therefore deduces the following law of dose: "Having chosen the remedy, according to the symptoms of a case, from the complete correspondence of the characteristics in disease and drug, we have only to consider whether the symptoms of the case generally have more resemblance to the earlier (*primary*) symptoms of the drugs, and then we give the lower potencies; or more resemblance to the later (*secondary*) effects, that is, to the symptoms produced by the higher potencies, and then we give the higher potencies."

Dr. E. M. Hale, in 1860, expressed the belief, and in 1874 reiterated it, that he had discovered the law of dose. He states that "the proper dose for each case may be selected with as much certainty as the proper remedy." Assuming that all drugs produce, and all diseases present, two series of symptoms (primary and secondary), and that in one or the other of these classes is embraced every symptom of drug or disease, he lays down the following rule:

"If the primary symptoms of a disease are present, and we are combating them with a remedy whose primary symptoms correspond, we must make the dose the smallest compatible with reason; and if we are treating the secondary symptoms of a malady with

a remedy whose secondary symptoms correspond, we must use as large a dose as we can with safety."

Von Grauvogl, in his *Lehrbuch der Homœopathie*, says:

"In ignorance of the law of proportional oscillation, some have sought to generalize these motions, and to call *primary effect* that which we bring to pass, and *secondary effect* that which, is the reflex action of the organism after the effect is complete. In this another mistake was made, viz.: that it was generally thought that the secondary effect could always be considered and looked for as the *opposite* of the primary effect, and hereupon indications were to be built up. This could only come to pass by the cotemporaneous but impractical further division of this alternation of phenomena into *chemical* and *dynamical*, of which the latter were held to be the more enduring. For example: primary effect of Quinine, swelling of the spleen; secondary effect, atrophy of the same; or, primary effect of Ipecac, nausea, convulsive cough, etc.; secondary effect, relaxation of the musculature, etc.

At the same time, the secondary effect was sometimes considered as only an intermediate stage, from which recovery might and should proceed; as for example, from Alcohol, first excitement, then bodily malaise (Katzenjammer), finally the normal condition again. And while, with the so-called dynamic remedies, the primary effect was to form the indication, it was to consist, with regard to chemical remedies, in the waiting for the secondary effect; *e.g.*, with Arsenic, primary effect, paralysis and emaciation; secondary effect, convulsions, gain in flesh and invigoration of the body, and other similar arbitrary divisions, which, however, are not taken from practical life.

That the whole question of primary and secondary effects turns upon the dose, not upon the question whether substances operate chemically or dynamically, is easy to demonstrate. But first, we must have decided whether, in this question, we will set out from the *large* dose of the physiological school, or from the *small* Homœopathic dose, since in both cases, there are primary and secondary effects. Sulphur, for instance, in the Allopathic dose of the physiological school, produces at first watery diarrhœa, as a *local effect* upon the intestinal canal, according to the law of causation; but not always in the Homœopathic dose, because it lacks this local effect according to the succession of cause and effect, for it brings the Sul-

phur *first*, not into the intestinal canal, but into the blood. Soon, however, diarrhœa is produced by Sulphur, even in a Homœopathic dose, but not in consequence of accelerated secretion of the inner wall of the intestine, irritated by the Sulphur, but in consequence of increased formation of bile and of its discharge into the intestines. For this reason the diarrhœa produced by the large dose of Sulphur is, at first, not bilious, though this is the effect of the small dose.

The secondary effect, however, in both cases, as soon as no more Sulphur is given, is precisely the *same*, to wit, obstruction. But this obstruction is no longer the effect of Sulphur, whether given in an Allopathic or a Homœopathic dose, but phoronomic, the result of the proportional oscillation of the organic activities.

If we take Sulphur in Homœopathic dose only, then we have a *series* of phoronomic changes, according to the law of reciprocal action, by which always two symptoms, the one following the other, show that, in the interior of the organism, movements have arisen, of which the preceding is always the cause of the succeeding. In this instance we should not, and strictly speaking, cannot speak any more of primary and secondary effects, and for the reason that here the primary effect can be no longer established according to the individuality, since in one case, cough with mucous expectoration, is the first thing noticeable, in another, palpitation of the heart, in the third, a hæmorrhoidal flow.

For the sake of curing, we must thus, in many cases, commit such a penetrating remedy as Sulphur in a minimal dose (often after one single dose), for some time to the counter-actions and reciprocal actions of the organism, and if the indication has been correct, the result cannot fail, and all the same whether we had to give the Sulphur for some kind of eruptions, an irregular menstruation, or a case of gout, etc., in accordance with the concomitant circumstances. . . . .

Hence the cure of such diseases by Sulphur is effected not in consequence of a *secondary effect*, according to the law of proportional oscillation, as warmth succeeds the coldness of the hand which has been in cold water, but in consequence of reciprocal effects induced by it and propagating themselves from part to part, within the organism, whereby the Sulphur taken (by the organism) may have been removed therefrom long ago. These are, therefore, no secon-

dary effects, but *series of effects* which themselves again have become the causes of other effects, and if we allow these series of effects, or to speak scientifically, these reciprocal actions, to run their course, undisturbed, then we may again designate this only as "*permitting the remedy to expend its force,*" in direct contrast with the so-called *secondary effects.*

If we were harboring the delusion that we had to produce, or wait for these secondary effects in order to attain a cure, would we thus establish indications, that we first had to disturb the self-activity of the organism so that we might afterward restore its equilibrium again, then we should with such senseless indications, which at best, could be thought of only by the worshipers of the *vis medicatrix naturæ*, have effected nothing but superfluous torture; for, to what would it lead, to give laxatives, that constipation might follow; or to hasten menstruation with Cuprum, Pulsatilla, etc., that it might afterward remit; to irritate or paralyze the functions of the organism to the very verge of their capability of resistance, that they might be able to help themselves?

In order to bring to a decision in a practical way the contending opinions relative to primary and secondary effects of drugs, let us adduce an example of phoronomic motion.

If we take several times a day a few drops of tincture of Belladonna, our organism experiences in various, but specific directions, an accelerated exchange, and in other directions a retarded exchange.

When first taking this drug in *small doses*, and for some days thereafter, there is evidently a *greater* quantity of carbonic acid excreted by the lungs, while during the action of stronger doses a smaller quantity is excreted. In general after the use of Belladonna the excretion of the infusible salts in the urine is *diminished;* on the contrary, the urea, the vesical mucus, the fusible salts, and the extractive matter are *increased.*

At first the pulse is *retarded* two or three beats in the minute, while at the same time an *accelerated, i.e.*, an increased excretion from the mucous membrane of the organs of deglutition takes place. If we persist in the use of the drug, injection and inflammation of the same parts take place, but now with *acceleration* of the pulse, four or five beats in the minute, and thus beyond the usual individual frequency. Hence, if the capillary vessels in any part are overfilled, the beat of the heart is correspondingly *retarded;* but, if

inflammation and swelling take place, then the pulsations are *increased* again, and remain at this height for three or four days even, *without any more Belladonna having been taken.*

These are clearly the *specific* effects of Belladonna, and *specific* counter-effects of the organism, because these occurrences as often as they are reproduced, must inevitably return in the same manner, and this, as long as the power of resistance of the organism against the influence of the Belladonna is not exhausted, or the movements of the Belladonna are not removed by those of some other substance.

If, for instance, during those inflammatory swellings in the organs of deglutition we take some drug *retarding interchange*, such as Coffee, in repeated doses, then the affections in the throat experience, *at once*, a marked alleviation, and on the second day have already disappeared, while the pulsation of the heart returns at the same time to its individual frequency, and thus much sooner than if these Belladonna affections had been left to themselves.

Coffee accelerates, indeed, the frequency of the pulse, but decreases its *force* manifestly, and the pulse afterwards is retarded below the individual (normal) frequency, and is small and weak. This increase of the pulse, however, is not accompanied by an increased excretion of carbonic acid from the lungs, as usually occurs in a proving of Belladonna. Coffee not only diminishes the exhaled carbonic acid for the moment, but constantly more and more, the longer it is taken, and thereby only the excretion of the solid substances of the urine, the urea, the uric acid, and urates, is *diminished.* Although Coffee at first accelerates the movements of the bowels, it yet retards them afterward, more and more; in the blood, the solid substances of the cruor, the serum, the albumen, and the blood-cells are increased, and the latter become even melanotic, as after the use of Belladonna, but they increase so that they manifestly diminish the reception of oxygen, and the excretion of carbonic acid, which again, is not the case after the use of small doses of Belladonna, when they are rapidly turned to bile in the liver, and are no more brought into the circulation.

But if, after the use of Belladonna we take Coffee in large quantities, then the inflammatory process induced by the action of the Belladonna is brought suddenly to a pause, and even the increased secretion of bile produced by the Belladonna is suddenly suppressed, with, at the same time, an increased frequency of the pulse. With

Coffee, moreover, the augmented frequency of the pulse (a substitute in the motions of the central circulatory system for the stagnation of the blood in the peripheric system) constantly increases, and without any inflammatory conditions being associated therewith (as is the case with Belladonna), this substitution is gradually weakened and finally lost entirely.

Here, we thus find not the least ground for the division of the symptoms of Belladonna or of Coffee into a *primary* and *secondary* effect; in both cases we saw, on the contrary, reciprocal actions in a specific manner, and varying only according to the dose. A *contrary* effect, however, we saw only between the action of Belladonna and that of Coffee following it, since the latter opposed the motions of the former.

Just as the so-called secondary effects must become known by the art of observation, *by the differential diagnosis between* the amount of motion of morbid substances and curative substances, just so it must be in the case of all drugs as regards the repetition of the dose. If we intend, for instance, in the scheme of Belladonna, nothing but lasting depression of the pulse, then it is self-evident that, when this depression is once reached, and not before, the dose which produced this effect ought not to be repeated till a pause, or rather the proportionally too early restoration of the frequency of the pulse, or its renewed increase, announces itself; moreover, if we continue to administer the remedy without regarding this, we get, at once, other Belladonna symptoms for which we did not seek—difficulty of swallowing, dilation of the pupils, etc.

As regards the *quantity*, it hence holds good, according to *natural laws*, that with a *changed quantity* of a dose of the same substance, a *changed quality* is always given, *as regards the organism*, although, naturally enough, not as regards the substance; and, as regards the effect, that, with every repetition of the dose *a new primary effect* is produced, at once, in the sphere determined by the quality. If we water a plant as often as is necessary for its growth, it will not be injured. If we repeat this watering too often, it grows too luxuriantly, and perishes. This, however, is no secondary effect, but only the result of the primary effect too often introduced of the unsuitable *repetition of the dose*."

Dr. P. Jousset, the clinical teacher in the Hospital Saint-Jacques, of Paris, thus states the doctrine in relation to dose:

"1. Every medicine produces on the healthy body two successive actions, primary and secondary. These two actions are always opposed one to another.

2. The stronger the dose of medicine, the less marked is the primary action. If the dose is excessive, the secondary action only is developed.

3. The weaker the dose, the more manifest the primary action."

Dr. Charles J. Hempel, now deceased, but well known as a translator of the works of Hahnemann and Jahr, and the author of a voluminous Materia Medica, held views similar to Dr. Hering, but goes deeper into the interpretation of the phenomena. In his lectures he says:

"I shall have frequent occasion to show you that drugs seem to affect the organism in two opposite ways, and may, therefore, be Homœopathic to two pathological conditions, holding towards each other relations of antagonism. We may illustrate this point by the well-known condition of fever. The first stage of an inflammatory fever is not a full and bounding pulse, a hot and dry skin, flushed face, and so forth; an opposite group of symptoms occur. The patient experiences a chill, or cold creepings along the back; he looks pale, hollow-eyed, the hands and feet are cold; the pulse is thin, feeble, rather slower than natural, or, at any rate, not much accelerated. This condition is soon superseded by the opposite group of phenomena, generally designated as fever. The chill is the primary effect of the disease; the fever constitutes a secondary effect, or the reaction of the organism. In selecting a remedial agent for this derangement, it should be Homœopathic, not only to the primary chill but also to the secondary group, fever. Aconite is such a remedy. Aconite is Homœopathic to the chill, which marks the first invasion of the disease, and to the fever which marks the beginning of the organic reaction. We are seldom called to a patient during the primary invasion of the disease; the organic reaction is generally fully established when we first see the patient. Nevertheless, we prescribe Aconite, knowing full well that the inflammatory stage must have been preceded by a chill.

We say that Aconite is Homœopathic to the chill, and we prove this experimentally by taking a large dose of this drug, of course within conservative limits, which will uniformly cause a more or less perceptible chill, coldness of the skin, depression of the pulse, all

which symptoms disappear after a certain interval of time, and are followed by the opposite condition, fever. A small dose of Aconite will not produce the primary chill, but will at once excite the organic reaction characterized by the usual phenomena of heat, flushed face, dryness of mouth, etc. This shows the importance of proving drugs in massive doses. It is massive doses that develop the primary drug symptoms; small doses do not develop these primary symptoms because the organic reaction very speedily supersedes them.

In practice it is of the utmost importance that we should discriminate between the primary and secondary action. If we are called upon to prescribe for a group of symptoms corresponding with the primary action of a drug, we give a larger dose than we should do if we had to prescribe for a group corresponding with the secondary action or organic reaction."

Dr. Hempel further adds that Aconite and Nux vomica may be used as Homœopathic remedies in paralysis as well as tetanus; Ipecac may remove complete atony as well as spasmodic irritability of the stomach; Opium cures diarrhœa as well as constipation, excessive wakefulness as well as drowsiness and stupor; Mercury will check as well as promote the secretory action of the pancreas; Secale answers in uterine hæmorrhage from atony as well as painful contraction from spasm.

The late Dr. Carroll Dunham and Dr. Richard Hughes, of Brighton, England, have given this subject very careful consideration, and I commend their writings for lucid and interesting discussions of the conflicting views of the authors I have quoted.

Dr. Hughes says: "This organism of ours into which we introduce drugs to prove them is a living one; it does not merely passively suffer under what is done to it, but reacts thereupon. If the impression made by a foreign agent is sufficiently potent, it bends before it with such subsequent recoil as the case demands. But it is readily conceivable that the impression may be so slight that the only notice taken of it by the organism is, so to speak, a resenting push in the opposite direction; and this also may be the earliest response to the influence of a drug, while, as its action gathers force, it bends the function it modifies in its own way."

Dr. Hughes accepts Dr. Hale's view as to what is primary and what secondary in the action of drugs, and also that "in any case of disease we must select a remedy whose primary and secondary symp-

toms correspond with those of the malady to be treated," always adding the proviso, "that there be such a succession of opposite states in either or both which does not by any means hold good in all cases." He objects to making a difference in dose according as the primary or secondary stage of the disease is present and calling the practice Homœopathic in both cases.

A medicine may be Homœopathic to two apparently opposite conditions, but no difference of dose is necessary in the two spheres of action; at least, no such difference as advised by Dr. Hale, who, Dr. Hughes declares, is plainly practicing antipathy when he uses doses sufficiently large to induce *primary* effects to remove conditions like the secondary reactions which are observed in drug effects.

Dr. Dunham so clearly expresses my own views in relation to this whole subject that I will conclude with quotations from a paper, written in 1875, entitled *Primary and Secondary Symptoms of Drugs as Guides in Determining the Dose.*

"The very terms *primary* and *secondary*," as illustrated by Hahnemann in the *Fragmenta*, *Organon*, and *Materia Medica Pura*, "seem to imply a succession of symptoms, more or less opposed in character, and all of them differing from the equilibrium of function which we recognize as health. The instances given, and, indeed, the only possible instances of which a "more" or "less," or an "opposite," may be predicated, as, for example, temperature, sleep, certain mental conditions, and the secretions and excretions generally. Thus we may have an unnaturally prolonged sleep or wakefulness, gayety or despondency, and a *plus* or *minus* of sweat, alvine discharge, urine, etc. But how could we have an opposite condition to any specified pain or subjective sensation, to parenchymatous deposit, cutaneous eruption, etc. The absence of these phenomena would be *pro tanto* a state of health; it would not be an opposed morbid condition or sensation.

The possibility, then, of classifying symptoms into primary and secondary on the basis of the relative nature of the symptoms, is not coextensive with symptomatology; it is partial, confined to a moderate number of conceivable morbid phenomena.

Shall we, then, in the second place, base the distinction on the element of time, and call the symptoms which first occur *primary*, and those which come later *secondary?* Where, then, shall we draw the line? How many hours or days shall we allow for the develop-

ment of primary symptoms? In view of the immense differences in the rapidity with which the curriculum of action of different drugs is run, it is obvious that a special rule must be established for each drug. Nor is this the only difficulty. The results of different doses on the same provers, and of different doses or even the same dose on different provers, are so various, that, first, as Hahnemann intimates in the preface to the *Fragmenta*, the symptom which appears in one prover to-day will not appear for several days in another prover; and, secondly, a very small dose may produce only one series of symptoms; a larger dose two series of opposed symptoms; a still larger dose two series differently opposed; and a very large dose again, only one series.

On looking over the register of symptoms of Argentum nitricum, we find reported as occurring early in the proving, irritation of the bladder and urethra, and increased frequency and quantity of urine, and as occurring later in the proving, diminution in frequency of micturition and in the quantity of urine. Surely, one might pronounce the former to be *primary*, and the latter *secondary* symptoms. But on examining the provers' *day-books*, we find that the majority of the provers (being those who took large doses) report the *former*, and *not the latter symptoms*. It was the prover who took the 30th who reported diminished urine, and *he* did not report any increase at any time. These symptoms, therefore, which appear in the register to be opposed, and properly distinguishable as primary and secondary, did not bear to each other any relation of opposition or correlation, as they might have done had they occurred in the same individual. They are different, unrelated, independent effects of different doses in different individuals.

Most of the provers of Tellurium taking the 3d trit. had, on the first and subsequent days, symptoms of the general sensibility of sweat, of the skin, of the bladder, etc. But one prover who took the 4th trit. had no symptoms at all until the 14th or 15th day, when cutaneous symptoms affecting the ear appeared, and were very persistent and troublesome. Were these symptoms secondary because they came later than *other* symptoms in *other* provers? And secondary to what? How can John's lumbago be secondary to James's toothache? But during the second month this same prover, his ear symptoms having vanished, had symptoms referred to the dorsal spine. Were these secondary to the ear symptoms because

they came later? Certainly as regards *time* they were secondary, because later; but being in nature wholly unrelated—neither opposite nor similar—they cannot be called secondary as regards nature nor as regards rank or value. Both have been repeatedly verified in practice.

Again, we are told that coldness—a condition corresponding to the chilly stage of fever—is the *primary* effect of Aconite, and that a state corresponding to the hot stage of fevers is the *secondary* effect of that drug. Let us hear Hahnemann. In the introduction to Aconite he says: "Aconite is one of a few drugs whose *primary action consists in several alternating conditions of chill or coldness and heat.*" And now let us study the day-books of the Austrian provers of Aconite.

Rothausl took tincture of Aconite in doses regularly increasing from six drops daily to fifteen drops daily for nine days, when, feeling powerful effects, he ceased taking it and noted his symptoms.

From the second to the eighth day inclusive, he had the following constantly-recurring symptoms: restlessness at night, bad dreams, *unnatural heat of body*, rawness and increased secretion in the larynx, cough, vertigo, headache. On the ninth day, after midnight, severe chill in paroxysms of shivering, starting from the præcordia, lasting two hours, followed by burning, dry heat, with frequent, feverish pulse, and this was followed by moderate sweat.

For the next six days he had various troublesome symptoms affecting the chest and limbs, and on the sixteenth day of the proving he had again, at night, a febrile paroxysm consisting of chill, heat and sweat, the first less severe, the last more abundant, than on the ninth day.

On the seventeenth day, at night, a similar febrile paroxysm. Then for seven days symptoms of increasing severity in the head and chest, ending with hæmoptysis on the nineteenth day, and finally, on the twenty-fourth day, a very severe and well-marked and defined neuralgic head and faceache.

How can the ingenuity of the most ambitious lawgiver find a pretext for dividing the symptoms (especially the febrile symptoms) of this excellent proving into primary and secondary? A febrile paroxysm occurred on the ninth, sixteenth and seventeenth days; before it and after it were well-marked symptoms of the chest and extremities. Which shall be primary and which secondary if date of occurrence determine the question? Which, if nature or if rank determine it?

Certainly, if lateness of occurrence stamps a symptom as *secondary*, then the neuralgic head and faceache—the very last symptom reported by Rothausl—must be classed as *secondary*. Not so fast, however! In the proving of Aconite by Zlatarovich with the second decimal, which he took in increasing and very large doses for seven days without effect, the very first symptom was a violent neuralgic head and faceache, almost identical with that described by Rothausl on his twenty-fourth day.

It appears, then, that Rothausl's *last* symptom was Zlatarovich's *first*. If the time of occurrence determines the class, we must rank Rothausl's headache among the secondary and Zlatarovich's identical headache among the primary, and thus we have the same symptom in each class, which is a *reductio ad absurdum*.

It will be noticed that these identical symptoms, produced at different times in different provers of Aconite, were produced by different doses. The opposite symptoms of Argentum nitricum in different provers resulted from different doses. . . .

There are many drugs which, having certain constant characteristic symptoms, have also series of alternating symptoms relating chiefly to the secretions. Among them we may mention *Veratrum album*, which has "Thin stool passing unnoticed with flatus. Frequent liquid stools. Liquid stools unnoticed with flatus. Diarrhœa of acrid fæces, etc." And also, "Constipation from thickness and hardness of fæces. A desire and compulsion to stool in the upper abdomen, and yet no stool or a very difficult one, as if from inactivity of the rectum or as if the rectum took no part in the peristaltic motion of the upper intestines." Also Hahnemann quotes from Greding: "Diarrhœa, with copious sweat," and "long-continued constipation."

The efficacy of Veratrum in the treatment of diarrhœa of an appropriate character, is universally conceded in our schools, and in my own practice. Veratrum has for many years been a frequently used and highly valued remedy for *constipation* in persons of all ages, but especially in infants and young children, in whom digestion appearing to be well performed, the evacuation of fæces appears nevertheless to be impossible because of the inertia of the rectum—a fact demonstrated by the circumstance that a healthy stool can be procured almost at will by irritation of the rectum, as by the common practice of introducing into the anus a piece of oiled paper, or a rubber bougie. We have here the apparent anomaly of the same remedy equally efficacious in diarrhœa and constipation.

Nux vomica furnishes a similar example. Its efficacy in certain forms of constipation as well as of dysenteric diarrhœa, is well known.

Let us now, for a moment, examine a little more closely the nature of the functions, affecting which the alternate series of opposed conditions (which have been called primary and secondary) are mostly observed in drug-proving. 1st. They are such as in the nature of things are periodic and not continuous; characterized by periods of repose and activity, and susceptible of quantitative and qualitative correlative interchange among themselves. Thus, sleep is periodic, and capable of being supplemented to a degree by other forms of repose to the nervous system. The intestinal canal, the genito urinary apparatus, the skin, in so far as secretion and excretion are concerned, have periods of activity and repose; and the inactivity of one may be made up by increased activity of another. And thus the function of any one of these apparatus may vary widely at different times without a condition of opposition being established. For this reason, then, the mere quantity of one of the excretions, or the degree in which any one of these periodic and convertible functions is performed, does not rank first among the indications on which the selection of a drug is to be based. If we now analyze the prescriptions of Veratrum and Nux vomica referred to, we shall find certain constant phenomena characterizing both the constipation and the diarrhœa, and which would determine the prescription almost without reference to the excretion. The Veratrum diarrhœa is uncontrolled and almost unnoticed by the patient, liquid fæces escaping with the flatus. Here we have a paretic and anæsthetic state of the rectum and sphincter. The Veratrum constipation exists solely because the rectum does not perform its expulsive functions, and is not, as normally as it should be, irritated thereto by the presence of fæces. Here, likewise, is a paretic and anæsthetic condition; but Veratrum is not fully indicated in either case without the characteristic general symptoms—general depression of vitality, predominant coldness of the body, pallor and cold sweat of the forehead or of the whole body on slight emotion or exertion; as, for example, on having a diarrhœic stool, or making the ineffectual effort to a stool, if constipated.

Both the constipation and the diarrhœa of Nux vomica are characterized by increased but uncoördinated activity of the intestine,

evinced by tormina and tenesmus and frequent insufficient stools, so that the condition of intestinal action is the same, whether there be, as in one case, a *minus*, and in the other a *plus*, of excretion—and, indeed, in the Nux vomica patient, these conditions often alternate. These remarks and instances will sufficiently illustrate my conclusions, viz. :

That the appearance or non-appearance of opposed series among the symptoms of a drug depends chiefly, if not altogether, upon the dose in which the drug was proved; and that the question of the constant and necessary appearance of such series cannot be determined until experiments with a uniform and the least possible dose shall have been made by many provers with the same drug, and in the case of many drugs—and therefore that, 1st. although in our Materia Medica, as it now exists, pathogeneses do present certain series of symptoms more or less opposed, nevertheless (excluding the symptoms of the agony, which are not available in practice), inasmuch as these series of symptoms occur in different orders in different provers, according to dose or idiosyncrasy, no sound practical distinction can be drawn between them, based on assumed difference of nature, by virtue of which they can be designated respectively as primary and secondary. 2d. That symptoms apparently opposed (not including those of the agony) occurring in a drug-proving are equally available as guides in the selection of remedies.

Coming now to the special subject of this paper, I justify the length at which the preliminary subjects have been discussed, by the suggestion that if I have shown that there is no basis for a division of drug-symptoms into primary and secondary, I have thereby shown the impossibility of a law of dose based on such a division. Or, if admitting that in pathogeneses there do appear groups of symptoms apparently opposed, I have shown that these refer only to certain functions, and by no means embrace or could be made to include the symptoms of the entire organism. I have thereby shown that an alleged law of dose, based on the existence of these groups must necessarily be partial, and therefore devoid of that generality of application to the entire pathogenesis which alone would justify the appellation "Law;" and I claim to have shown these things."

PHYTOLACCA—LEAF, FRUIT, AND ROOT.—THE VALUE OF EACH.

By Robert Boocock, M.D., Flatbush, L. I., N. Y.

When we have found a use for anything not before fully known, or developed that which was but partly understood, some investigators would be tempted to make further search for other more hidden beauties or features that may prove of greater service in the cause of humanity. Thoughts such as these have led me to the study of this very valuable plant, as well as a desire to see its history and usefulness properly enrolled in our World's Congress meeting. It will doubtless prove true that all I may write will not be new, but if I repeat known facts concerning the plant it will be only because they are necessarily inseparably connected with the new data which I hope to present, and I will begin as I would the examination of a patient, with its history, and follow with its value by provings and its curative power as evidenced by clinical facts.

Scoke root, Poke root, or Garget root; Phytolacca, radix et bacca, U. S. Ph.

Botanical History.—This plant is a large, succulent, perennial herb, with a very thick, light-colored green leaf almost oval in shape, a deep channel down the centre of leaf, and twelve or more deep veins branching from and running to the edges; but before they quite reach the edge they turn again towards the point of the leaf, as if nature designed the water to be held on the leaf as long as possible for some wise purpose. At night they shine like phosphorus, though not quite so bright. Upon closer inspection there may be seen the beautiful cellular texture throughout the leaf, together with a number of irregular-sized white spots, but which latter, on being examined through a magnifying-glass, prove to be diseased spots of an irregular shape and size, reminding one of *tuberculous* lung tissue. Only the outer edge of the spots, however, are white—at that point where it comes in contact with the green leaf—while

towards the centre of the spot we have a deepening in color and depth. I am inclined to think that a closer and more persistent proving of what is here mentioned merely as a suggestion may prove of great curative power in tuberculosis of the lung. So much for the leaf.

Fruit.—The cylindrical racemes of white flower (which ought to have a place in our gardens for their beauty), then the dark purple juicy berry. These latter are sweet and pleasant to the taste when first taken into the mouth, but presently it changes to a tannic-acid taste, and, if the seeds be broken by the teeth, they emit a pungent, bitter taste. The flower is pretty, but the fruit is more beautiful. The whole plant increases in size and beauty until fully matured; then the stems, in a measure, partake of the purple color of the fruit. The plant, however, is not done with when flower, fruit, and stem are gone. The thick, light-colored fleshy root, somewhat like a parsnip in color and shape, but very much larger, is the oldest known medicinal part of the plant, and is full of clinical value. This, when fully grown, will measure, across the crown, many inches, dividing itself into two or three large branches. Externally, the root is brown, and light-colored within. When dry, it is gray, hard, wrinkled, and inodorous. Taste, sweetish, acrid. Mr. Edward Preston, Jr., found starch, tannin, gum, sugar, resin, fixed oil, a volatile acid, and an alkaloid, which latter he calls Phytolaccine. Claussen obtained from Phytolacca seed a neutral principle, and for this the name last given was also proposed. From medicinal sources we learn that all parts of the mature plant are active, and in sufficient doses cause vomiting and purging. It has also some narcotic power or stupefying influence, and in poisonous doses, in addition to the intestinal symptoms, convulsions, coma and death may follow. Its action is slow and protracted.

The clinical uses made of this plant are as follows: emetic; rheumatism; scrofula; inflamed breasts, ovaries and testicles; cancer and indolent ulcers; tonsillitis; diphtheria.

Provings.

On chewing the matured leaf at different times a smarting and burning is produced throughout the whole of the mouth and throat, hard to bear; no swelling; dry cough and hiccough; belching of wind and inclination to vomit; a feeling as if the occiput were

grasped or compressed. It leaves in the mouth a greasy, smooth feeling; but the most intense feeling of distress is in the stomach which is very full, and the contents swell upwards from a cramp-like, spasmodic feeling like a wave passing from the bottom upward; the hiccough is very distressing, a pain extends through to the back under the scapula—more to the right than to the left. The pain which is deep-seated begins in the neck and renders it difficult to hold up the head, with an inclination to drive the head deep into the pillow for rest. This cerebro-spinal action makes one very weak, causing a dragging of the feet which catch and stumble in walking.

There is difficulty in breathing as if the lungs were swollen and had not room to properly expand, and the effort to do so causes a cough—or a hiccough and belching of wind—which may continue for several hours after eating; during this time the salivary glands discharge freely, but the secretion, if held in the mouth, will work itself into a thick foam; the smarting in the fauces produces a swelling of the uvula, a lumpy feeling in the throat, but which does not interfere with swallowing, except that the frothy saliva does not go down readily, being apparently held in the upper part of the throat; the voice is thick and weak, and there is no desire to make any effort to be heard; prover is very weak, retired early and slept well. When awake there is a soreness in the throat and an inclination to clear the husky voice by hawking up phlegm, which comes up freely. Urine is free.

Phytolacca Berries—During my proving of this fruit—the suggestion for which proving I found in Hale's *New Remedies*, first edition, some years ago, I was much annoyed at my bodily shape, and was rather overjoyed as I remembered the reputed powers of these berries over adipose tissue.

Having determined to make a proving of the berries, I secured them from my garden, prepared and took them, and in a few months reduced my proportions and again became shapely, having lost my protuberant abdomen. (Report of this will be found in the *Homœopathic Recorder* of January, 1893.) The juice of these berries when first pressed is of a deep and bright reddish color and dyes of the same color; but when long kept it becomes darker in appearance; and if alcohol be used to preserve its color (which it does) it loses its power to stain, or else the stain soon fades away; the power to reduce adipose tissue

is not destroyed though somewhat decreased. This latter fact caused me to inquire further into the properties of this berry, and my conclusion is that alcohol is not the best preservative vehicle.

I became convinced that birds could digest the whole berry, hull, seed and juice, and so their fat is rapidly consumed; but in which part of the fruit this great virtue resided I had no means of saying without first making a proving. In consequence I have been re-proving them, taking the leaf and stalk first, and the hard seed next, chewing them after having had them well-washed and dried, and free from the juice, and the following is the result:

I began by chewing the seed, putting a pinch of the seed in my mouth, as they were drying them, and chewed them vigorously, but their bitterness was not pleasant. I found they had power to affect the muscles of the abdomen. So I sent a quantity of the seeds to Messrs. Boericke & Tafel for pulverization and trituration to the first; of this I have taken a powder two or three times daily on an empty stomach, and in the month of experiment I have reduced my girth measure three inches. This led me to think that the principal virtue over adiposis lies in the acid of the berry and seed, and that Phytolacca semen, 1x trit., has a peculiar power of its own, the taste being still slightly bitter. On proving, the first effect is felt in the head, pain or dull feeling, right side over the temporal region, and is most from within, as if there was a fulness under the temporal bone; it then passes across the head to the left side and presses under what is usually spoken of as the "bump of veneration;" there is a slight feeling of fulness in the ears, and an aching in the atlas, at the base of the skull. It then is felt in the stomach, producing a severe pain (such as I have heard described as arising from a perforating ulcer) going through to the back, but no feeling of fulness or belching of gas, only pain. One fat lady to whom I gave it had to decrease the dose and take it less frequently because of this pain in the stomach and abdomen.

The pains in the abdomen seem to be in the muscles or between them and the peritonæum. The pains are of a drawing character, and they draw inward as if there was a contraction or a shortening of the broad ligaments, and the seat of this drawing is below the umbilicus.

It has power to contract the prostatic gland or to expand the bladder, for large quantities of urine can be held in my own case,

I can hold a good four ounces and have only to pass it four times in a day. The water is light colored and leaves a lime deposit. All express themselves as passing more water and of holding it longer. Many of my own women patients have large pouches of fat below the umbilicus that rest upon the thighs when sitting; this presses up the bladder and contracts it so that it in some cases it is difficult to say whether the bladder is enlarged or only relieved from the pressure as the fat is reduced.

But there is a dull feeling amounting to a soreness in the region of the kidney and making one believe it will have power over the enlarged kidney. The aching is similar to that described by the sufferers from Bright's disease. It never amounts to a pain, only to an aching and tired feeling, that makes a chair with a good back to it feel comfortable.

I have fancied that my hips were somewhat stiff and sore during the time I was taking it, but have not been any less able to do my duty or play my favorite game of cricket.

The proving of the Phytolacca root has been so well made by so many and is so well known, that I cannot say anything new about it, but only this, that my provings have confirmed the symptoms as described in our Materia Medica, and especially in the *Encyclopædia* of Allen.

I could give you many cases that have been greatly reduced in flesh and made to feel comfortable in their actions and breathing, but as it is too early in some cases, perhaps I had better not.

I have seen it stated that the Phytolacca tincture of Dr. Howe is made from the whole plant. Well, perhaps, that may be the better way—and yet I am somewhat inclined to believe that there is some truth in what is called the law of signatures—so far as to believe that the breathing organs of a plant may possess more affinity to or for the breathing organs of the sufferers. And the instinct of the lower animals leads them to eat the leaves in most cases of medicinal plants, and only rarely the branch or bark; seldom if ever the root.

I am sure that in the Phytolacca leaf we have a very valuable cough remedy. In those dry throats with much tickling in the throat that nothing seems to reach—which produces such distressing coughs, dry bronchial coughs with sensation of roughness and increase of heat in trachea and difficult or no expectoration.

A few cases of this kind of cough have been greatly and promptly relieved.

How shall we make our tinctures, seeing that alcohol has some detrimental influence over some parts of the plant or fruit and leaf or color, and thus to a certain extent will mar or interfere with its usefulness in some of its finer shades? Fully believing that the bountiful benefactor who has created all things to satisfy the perfection in Himself, would not put even the coloring matter to the fruit or flower if there was nothing to serve thereby—so that in my judgment everything should be taken as nature has prepared it.

Glycerine is the most pleasant way, but it cannot be accepted or made to apply to all the modes of usefulness.

The acetic acid or vinegar keeps it best and clearest in all its ways, but this makes a combination and cannot be used unless we make a proving of it as such, and that I propose to do during the next two weeks.

September 8, 1892, measurement is thirty-one and one-half inches, tight, abdomen.

REPORT

OF THE

SECTION IN OBSTETRICS.

CHICAGO, ILL., Thursday, June 1, 1893.

THE Section in Obstetrics convened in Room 7 of the Art Building, and was called to order by T. Griswold Comstock, M.D., of St. Louis, Mo., Chairman of the Section, who then read his Inaugural Address.

At the conclusion of the address the Chair announced a paper by John C. Sanders, M.D., of Cleveland, O., on "Scarlatina in the Gestative and Puerperal States." The author of the paper being absent, it was accepted by title.

E. S. Bailey, M.D., of Chicago, Ill., read an essay entitled "The Habitual Death of the Fœtus in Utero." It was discussed by Drs. R. Ludlam, of Chicago; R. N. Foster, of Chicago, and Arthur Fisher, of Montreal, Canada.

A paper by H. E. Spalding, M.D., of Boston, Mass., on "The Levator Ani as Related to Parturition," was read by title and accepted, as was also a paper by L. L. Danforth, M.D., of New York, N. Y., entitled "A Comparative Study of the Operative Procedures Applicable to the Commoner Varieties and Degrees of Pelvic Deformity."

George B. Peck, M.D., of Providence, R. I., then read a paper on "The Rational Treatment of Certain Puerperal Disorders." The paper was discussed by Drs. L. C. Grosvenor, of Chicago, Ill.; Alonzo Boothby, of Boston, Mass.; R. N. Foster, of Chicago, Ill.; R. Ludlam, of Chicago, Ill.; C. H. Coggswell, of Cedar Rapids, Ia.; H. W. Robey, of Topeka, Kan.; Sheldon Leavitt, of Chicago, Ill.; —— ——, of Harvey, Ill.; J. W. Hingston, of North Platte, Neb.; Phœbe J. B. Waite, of New York, N. Y.; F. B. Righter, of Lincoln, Neb.; F. J. Becker, of Postville, Ia.; Martha G. Ripley,

of Minneapolis, Minn.; C. B. Kinyon, of Rock Island, Ill., and by the author of the paper.

"The Year's Progress in Obstetrics," a paper by Sheldon Leavitt, M.D., of Chicago, Ill., was read by its author and discussed by Drs. L. C. Grosvenor, of Chicago, Ill.; Martha G. Ripley, of Minneapolis, Minn.; J. W. Hingston, of North Platte, Neb.; H. E. Beebe, of Sidney, O., and by Dr. Leavitt, the essayist.

"Puerperal Fever," by J. B. G. Custis, M.D., of Washington, D. C., was read by the writer.

Next came an essay on "Puerperal Eclampsia," by Lemuel C. Grosvenor, M. D., of Chicago, Ill., which was read by its author.

"Puerperal Insanity," by M. D. Youngman, M.D., of Atlantic City, N. J.; was presented by the Chairman. In the absence of the author, the paper was read by the Secretary of the Section.

The Chairman here announced that the three papers just read were open for discussion. The debate was participated in by Drs. L. C. Grosvenor, of Chicago, Ill.; Clara Yeomans, of Clinton, Ia., J. B. Gregg Custis, of Washington, D. C.; S. W. S. Dinsmore, of Sharpsburg, Pa., and M. D. Youngman, of Atlantic City, N. J.

"Some of the Diseases Preventing and Complicating Pregnancy," a paper by Henry C. Aldrich, M.D., of Minneapolis, Minn., was presented by title. The Section then, on motion, adjourned.

SECTIONAL ADDRESS IN OBSTERICS.

By T. Griswold Comstock, M.D., of St. Louis, Mo.

Whilst in the enjoyment of a grateful pride for the very distinguished place assigned me before this learned body—representing the ablest practical and scientific activities of the entire civilized world—I confess to a sense of distrust as to my ability to meet the requirement of this distinguished occasion. I appreciate it as the opportunity of my lifetime—not attained in the past, and with no reasonable expectation that it will be duplicated to me in the future.

While thanking you most heartily for this preferment, I beg to throw myself upon your kind forbearance and indulgence as I proceed with the duties of the hour.

And first of all, shall we not indulge a profound sense of gratitude to the all-wise Giver of all good and perfect gifts, that our lots and lives have fallen to us in these pleasant places of wonderful progress in all the departments of human activity. Never before in all historic humanity have we witnessed the like, whether by personal experience or history, in all that pertains to commerce, science, agriculture, law, statecraft, medicine, art, and last, but not least, the church. One hundred years ago a prediction as to present results in all these departments would have entitled the prophet to serious consideration in the line of qualification for residence in a lunatic asylum. In statecraft the old modes of bitterness, strife and violence are giving way to the peaceful ones of gentleness, conciliation and compromise by means of arbitration. From present indications, the soldier must ere long beat his spear into a pruning-hook and his sword into a plowshare, when the nations shall learn war no more. May we not indulge the fond hope that the universal brotherhood of both nations and individuals is rapidly approaching?

In science and natural history, we delight to do homage to such luminaries as Darwin, Huxley and our own brilliant Edison. In statecraft and political economy, we find such notable worthies as Bismarck, Gladstone and Lincoln.

In commerce and finance the merchant princes, financial kings and railroad magnates, have given an impetus to trade, transportation, travel and personal communication, by land and sea, never before dreamed of, and contributing a blessing alike to the peasant in his humble home, and the king upon his throne.

To the church, we are indebted for the humanizing and blissful graces giveu us by Christianity, and presented to us by the faithful, indefatigable works of Phillips Brooks, Spurgeon, Talmage and Joseph E. Cook. I take pleasure here in placing great church-workers on the roll of honor. For whether we esteem Christianity a myth, a fiction or a reality; whether we be atheists, skeptics or religionists, it is simply absurd to deny that its elevating and ennobling influences, are the very foundation stones of our present progressive civilization, refinement and enlightenment.

In our own blessed profession, we are proud of and grateful for such noble, indefatigable workers as Virchow, Charcot, Sir Joseph Lister, Gross, Marion Sims, Thomas, Ludlam, Helmuth, and last but by no means least, the immortal Hahnemann.

Many of these noble worthies have gone *beyond;* while they rest from their labors, "their works do follow them."

In the last 2000 years, three events have transpired, and have exerted an influence upon human destiny, that to our limited ken, is simply incomprehensible and approaches infinity.

Reverently, devoutly, with no thought of comparison I meution the birth and the work of our Lord and Saviour Jesus Christ, who gave us a system of morals and benevolence, pure, sweet and gentle; secondly, the life and public service of Columbus in the discovery of a new continent; thirdly, Hahnemann's discovery of a new symptomatic and therapeutic chart, for the cure of disease. It does not matter whether we accept the claims and purposes of these three great events, without dissent or protest; or whether we enter protest to much or little; the fact remains that results have been incomprehensible to our finite ken. Christ furnished a rule of life and conduct, with lofty aspirations without parallel, precedent or sequent. Columbus got an immortality in history by doubling the metes and bounds of the then known *terra firma;* whilst Hahnemann got an almost equal immortality, by revolutionizing and upturning the destructive and heroical modes of old-time physic.

The sublime inspiration of a persistent, ever-prevailing idea, was

present with each, and brought results corresponding to the inspiration. This inspiration of an idea, is the key-note in the history of every great and noble enterprise in life's work. By the terms of my thesis I should be confined to the limits of the past year's progress. But we find 1892 lapping backward into 1891, and forward into 1893, in such fashion as to make precise conformity difficult; we shall therefore roam and revel, when and where we please, in the abundance of opportunities around us.

There is a noteworthy tendency to simplicity in the management of utero-gestation, and the parturient and puerperal states. They are no longer to be regarded as states of disease, but as normal and physiological conditions, requiring neither medicine or manual manipulations; and should be trusted to a rational hygiene in its broadest sense. In labor the officious and vicious manipulations and handlings so often prevalent, should be condemned. The obstetrist with an aseptic hand, through a well-cleaned vulva, should ascertain the exact presentation and relative adaptation of parts to the process, and then largely leave the issue to dame nature's efforts. We do not mean to ignore disinfectants as such; but above all and best of all we commend plenty of soap and hot water. Formerly the result as to mortality, was largely against hospital experience, as compared with private practice. Precisely the reverse is true now; and attributable to the scrupulously clean doctors, nurses and patients to be found in every well-regulated lying-in hospital.

The most enlightened practitioners are now engaged in an effort to dispense with the constant handling and manipulating heretofore in vogue; especially, among midwives, in the management of labor. In many cases this vice is not altogether chargeable to the obstetrical attendant. The patient being in pain, very naturally, with her friends, appeals to the attendant for help. This she expects him to do by keeping his hand constantly within the vulva. Women in confinement or approaching confinement, should be educated out of any such foolish demand or expectation.

In olden times, Ergot by its incautious use, was a fearful implement of destruction in the hands of practitioners of midwifery. It was especially the "help at hand" for the midwife. Its power for evil to both mother and child is so great that medical men of the best repute have practically abandoned it altogether as a *parturient*. The following aphorism from Prof. Pajot we fully indorse. He says:

"*As long as the uterus contains anything, be it child, placenta, membrane or clots, never administer Ergot.*" We are aware that not a few practitioners will give Ergot for inertia uteri after the delivery, but we insist that it should not be given unless the placenta is passed, and the uterus free of clots. Then its opportunity for legitimate use is as a hæmostatic, in the prevention and cure of post-partum hæmorrhage. Ergot was once designated as *pulvis ad partum*, but from its incautious use, it may well be named as *pulvis ad mortem*. Formerly we had no little trouble in the use of Ergot for the want of a permanent and reliable preparation. Several preparations of the fluid extract are now obtainable which are excellent, but the preparation coming to us and called Ergotole, from Sharp & Dohme, of Baltimore, is the best, and will be found more efficient than any other. In this connection it may be well to mention hot water irrigations, as one of the best hæmostatics in not only midwifery practice, but also in surgical practice. In cases of post-partum flooding, should hot water not suffice, its alternate use with ice-water injections may be serviceable as a means of startling the patulous sinuses into healthy contractions.

We have recently arrived at a much safer and better understanding as to the indications and contra-indications, justifying and requiring the use of the forceps. Many a woman and child have been lost for the want of prompt and timely use of this valuable instrument; while others have been sacrificed by its incautious and premature application.

When the labor is protracted and mother or child in any danger from the delay, and the danger will cease with rapid delivery—if the circumstances are such that the forceps may be used—they are always indicated.

As a substitute for the Cæsarean section, much interest just now is being exercised in behalf of *symphyseotomy* or *synchondrotomy*. Of course, this operative mode is not a novelty. It was proposed and practiced a very long while ago. First by De la Corrue in 1631, then by Sigault in 1768, and by Stolz modified into a pubeotomy. Winckel, of Munich, says of the operation:

"It has not fulfilled what was predicted of it, but has produced, in many instances, what was not expected—injuries of the bladder, stretching of the sacro-iliac articulations, and caries of the anterior wall of the pelvis. *May this be forever entombed!*" Notwithstand-

ing the above, from so conservative and experienced a man as Winckel, we are obliged to keep up with the changes and experiences of this present age.

Recently, under the advantages of superior surgical skill, combined with our practical experience of aseptic procedures, some encouraging results are said to have been attained from this operation. An interesting article upon the operation in question, giving statistics and results, may be found in the April number of the *Medical Century*, Chicago. Obviously, the advantage to be gained is in saving the integrity of the peritonæum and the uterine wall. We therefore hope for this operation a creditable success in the near future. The drawback in the operation would seem to consist in tardy rearticulation of the divided symphysis. With suitable surgical, pelvic constraint, and requisite avoidance of locomotion, this difficulty may possibly be reduced to the minimum.

The operation known as episiotomy, while not a novelty or anything new, has recently been brought into more pronounced notice, as a means of relief, to prevent laceration of the perinæum. The operation is very simple, consisting in making lateral incisions into the labia. It has been called "the young practitioners' operation." This is an unjust fling against it. It is an operation practiced in the best lying-in institutions in Germany. We first learned it when a pupil of Prof. Braun in Vienna, and have had occasion to practice it occasionally for the past thirty years. Any mode of management which so safely and simply prevents the dire disaster of perineal rupture ought not to be lightly esteemed. These lateral incisions repair soon with or without trifling surgical assistance. It may be advisable in some cases to apply catgut sutures. In this place we have a word to say as to the *time* for surgical repair of a lacerated perinæum. In olden time repair was postponed almost indefinitely, and only attempted in very bad cases.

A great deal of the work the gynæcologist has to do, is caused by the injuries that happen during parturition. To protect the perinæum during the passage of the child's head and shoulders, is the duty of the skilled accoucheur. Lacerations of the perinæum, unrepaired, cause untold miseries to women, and render their lives wretched. They are liable to occur in labors where instruments are not employed, or they may result from their unskillful use. But such accidents often happen to the most experienced and skillful

obstetrist, and the circumstances of the case may be such that they cannot be avoided. After every labor the accoucheur should (before leaving the lying-in room) carefully examine the vulva by an ocular inspection to assure himself of its exact condition. If rupture of the perinæum has occurred, it is his duty to repair it at once.

This should be done as soon after the delivery as may be practicable—within the first six hours if possible; it is unsafe to wait longer than sixteen hours. However, in two cases in my own experience, the operation proved a success, when made twenty-four hours after the delivery. The consensus of opinion of the authorities in midwifery the world over, now insists upon the *immediate* repair of a perinæum ruptured during labor. In giving this opinion so positively, it may be supplemented by the statement, that there are exceptions to this rule—the circumstances of the case may be such that the primary operation will be contraindicated.

An operation for laceration of the cervix during labor, may with entire propriety be deferred beyond the puerperal state, and yet its immediate repair is already advised by some experienced obstetrists.

Saturating the vulva with hot oil, to be kept hot by frequent application of compresses out of hot water, has recently come into much use and favorable notice as a simple and practicable means for relaxing the unyielding parts, threatened with laceration. This is to be practiced just when the head is ready to pass through the outlet.

To Dr. Thomas, of New York, belongs the credit of having recently introduced and practiced a modification of the Cæsarean section as a substitute for craniotomy. Early in the present century, Ritgen, Sir Charles Bell, Raudeloque, and others conceived and suggested the plan of which the industry and skill of Dr. Thomas have made a practical illustration. It is known as laparo-elytrotomy. Its object is to effect delivery in pelvic deformities without craniotomy, and at the same time save the integrity of the perinæum and the uterine wall; an object and result most devoutly to be wished for by every cautious and conscientious practitioner. No prudent surgeon ever passes his knife through these parts without a painful misgiving, with all the precautions against sepsis. The initial incision in this operation, is made an inch above Poupart's ligament. Then by a cautious dissection and separation of the peritonæum from its sub-cellular connections, it is pushed up so as to

enable the surgeon to dissect down to the cervical end of the vagina, which is freely cut laterally (across) so as to reach the fœtal head through the os and deliver above the symphysis pubis. Anatomical familiarity with the parts, a steady hand, and a bright eye, render the operation by no means difficult; and while statistics are by no means all that might be desired, in the way of favorable results, yet the operation promises well, as a *dernier ressort.* In extenuation of any unfavorable result in this and kindred cases, it should be borne in mind, that surgical interference is usually deferred until the bodily vitality of the mother is so low, that the simplest surgical operations are liable to terminate disastrously.

Occipito-posterior position of the fœtal head in labor, has of course been liable to occur at any time since labor and child-bearing came to be a fact. Yet, it does not seem to have received careful recognition and systematic attention until recently. According to Dr. Uvedale West, who studied the subject very carefully, it seems to have occurred 79 times in 2585 labors; all of the labors being exceptionally difficult. The failure of recognition seems to grow out of a seeming obscurity of the parts in the matter of examination. I remember at a medical society one evening, the *manakin* with the fœtal head in this position under cover, was presented for opinion, from several men of ability and experience, not one of whom recognized or diagnosed the position correctly. Practically, the state of the case consists in the failure of the occiput to rotate anteriorly towards the symphysis; so that the occiput is situated posteriorly at the promontory, while the forehead and face are at or under the symphysis, presenting the very longest diameter that can be made of the face and cranium, to one of the shorter pelvic diameters. A marked peculiarity of such cases is, that the chin instead of being pressed down upon the sternum is drawn as far away as possible; this fact serving as an important element in the matter of diagnosis.

Three modes of management have been suggested. The first is to leave the case to the efforts of nature, under the hope that a spontaneous rotation of the occiput may bring it under the symphysis and so terminate the labor as one of the normal varieties. And, what is remarkable, not a few of such cases thus terminate favorably by the unaided powers of nature. The second is to make pressure upon the frontal bone so as to bring the chin to its normal position on the sternum, while making oblique lateral pressure on the head

under the symphysis, with a view of inducing rotation of the occiput towards the symphysis. In fine the manipulations of the accoucheur should be such as to constantly favor *flexion* of the head, which will facilitate the descent of the occiput, and resist the descent of the forehead, by pushing it towards the sternum, keeping it in a constant state of flexion.

The third method is to deliver with the forceps with the occiput-posteriorly. In the main, experience will show from the results of any or all three modes, that it were much more lucky to have escaped the case altogether, than to be responsible for its management.

The question whether it is ever a legitimate operation to destroy the child's life to save the mother, is one that must be answered. We will not discuss it in extenso, for we could easily write many pages upon it.

To sum up, a case may occur, where the labor has been greatly prolonged, where the mother's pulse is very rapid and weak, and the temperature so high as to indicate danger from complete exhaustion, that may terminate suddenly with death, unless she is relieved by an immediate and rapid delivery. Added to this, the pulsations of the fœtal heart being very faint—indeed, almost inaudible—and, consequently, the absolute indications for the Cæsarean section are absent. In such a dilemma, when the mother cannot last much longer, if the obstetrist (who we will suppose is an expert as a surgeon) elects to make a rapid Cæsarean section—either by the Porro, or Sanger method, in all probability the result will be fatal to both mother and child. Either craniotomy or embryotomy must be a last resort. So many objections are made to this serious operation, that the practitioner must be certain that there is *nothing left but a resort to it.* A short time since, we were in consultation with a celebrated practitioner (an ex-professor) in a case of lingering labor, with occipito-posterior position, where the head was impacted, and rotation could not be made. The forceps were tried, but it was impossible to effect the delivery. This ex-professor proposed the Cæsarean section, but the family dissented in the most positive terms. The doctor insisted that he would withdraw from the case, if the operation was refused. The impaction was so firm, the mother's condition so low, and the child's vitality in such doubt, that craniotomy was the only resort.

In this connection we beg permission to call attention to a remarkable case of Cæsarean section reported in the December number of the Chicago *Clinique*, by our esteemed colleague, Prof. R. Ludlam. We here give an abstract of the case:

A woman some months pregnant, was found to have a contracted pelvis, with two fibroids blocking up the uterine outlet. An exploratory incision was made, and the uterus was found to contain a living fœtus. One of the fibroids was removed, and the incision was closed. When the pains came on, at the full term of gestation, in December following, Dr. Ludlam performed the Cæsarean section, with antiseptic precautions, and removed a healthy child, weighing eight pounds, and saved both mother and child. It is due our friend Dr. Ludlam, to state that his conception of the complicated difficulty was not only bold, but brilliant and practical in the extreme.

In the matter of therapeutics peculiar to utero-gestation and the puerperal state, there is such a growing tendency to consider these states physiological and normal, as to discourage the practice of drug administration almost altogether.

In obstetrical therapeutics we have recently made more advance in the uses of electricity than in any other direction. This agent has come to the front recently after such fashion in commerce, science, art, propulsion and heat, as to make one's head almost giddy when he stops to think of present realities and immediate future promise. To the obstetrist it possesses peculiar interest in the management of uterine inertia, and spastic irregular uterine action. In the severe lumbar pains of the first stage it serves a valuable purpose; also for cramps of the lower extremities in the second stage. For such purposes, both the galvanic and faradic currents will be found useful, in accordance with the special symptoms.

The destruction of the fœtus in extra-uterine pregnancy by the faradic current has been recently proposed, and received practical attention. If the dead fœtus becomes encysted so as to convert it into a benign tumor, we may have relatively a happy solution or conclusion of a grave difficulty. Should signs of decay and disintegration take place after the faradic application, we should promptly resort to laparotomy to save the patient from the horrors and complication of a widespread septicæmia. We should say of such cases as we did of occipito-posterior position: it is much better to escape

them altogether than to be responsible for management and result.

The puerperal state is subject to various febrile disorders; some transient, some more permanent. We think the peritoneal form usually known as *puerperal* fever is less frequent than formerly, and even now not so frequent as may be supposed. We believe there is a puerperal fever which is a *zymotic* affection or an essential disease, and other forms that are septicæmia. No doubt the majority of puerperal fevers originate from heterogenetic causes, and may be regarded as puerperal septicæmic. This is the opinion of the majority of clinicians, who esteem it de facto as a septic process and closely allied to surgical fever.

No doubt cases of puerperal fever may occur from auto-infection as well as hetero-infection. When the results of traumatism are considered, it would seem, in certain cases, to be independent of either. The practical thought to be kept in mind is, that woman in the puerperal state is much predisposed to the adverse influence of any toxic agent that may happen to be near her. Precisely the reverse is true during utero-gestation. But in the puerperal state neighborship to cases of any malignant or contagious form of disease always renders puerperal fever probable. Physicians in attendance upon diphtheria, scarlet fever, or malignant typhus should decline all obstetrical calls or engagements. Physicians afflicted with obstinate chronic ulcerations and discharges, *e.g.*, ozena, should never trust themselves in the lying-in chamber. It does not seem probable—only exceptionally—that this fever is propagated by any specific contagion, as we find in the causation of small-pox, scarlet fever, measles, and whooping-cough. Yet of two women in the same ward or room, both in the puerperal state, if one should chance to get puerperal fever, she will very likely communicate it to the other.

As perfect asepsis in labor is the first care of the obstetrist, antiseptic agents should be always within reach. There is quite a list of those that possess distinct virtues.

Hot sterilized water, Boric acid, Calendula, Listerine, Corrosive sublimate, Creolin, and Lysol all have their especial uses as antiseptic agents, but after sterilized water *Lysol* is the most reliable. It is one of the most powerful germicides that we possess, and in gynæcological and obstetrical practice is perfectly innocuous. It is not costly, being derived from tar-oils by boiling with alkaloids and fats.

It is employed in solutions of from one-half to three per cent. Sublimate, which is a powerful germicide, and is dangerous to some patients. Drs. Welsh and Vance think that it has already done more harm than good. We are not quite ready to banish it from the accoucheur's *armamentarium*, but it must be used with great caution. In a solution of $\frac{1}{10000}$, in our own experience, it is absolutely safe. In organic kidney affections it is contra-indicated. The trouble with it would seem to be that it is an agent so powerful that we are all the while in danger of getting more than we bargained for. The puerperal woman would seem to be especially susceptible to its toxic action, as deaths have been reported from its use when used in a solution of $\frac{1}{1500}$, and possibly in solutions still weaker.

The obstetrist will by no means seem to have discharged his whole duty without suitable attention to the little stranger. Formerly, if the said stranger indulged anticipations as to the immediate future after his arrival, he expected a hearty scrubbing in hot soapsuds, as a means of bodily renovation, at the expense of damage to both skin and eyes. Now we treat him to frictions in warm oil, followed by a warm bath without soap, and drying frictions with warm soft cloth, all accomplished so dexterously and quickly as to save exhaustion and bodily depression. If he arrives in anything like a feeble or bad condition, he gets the warm oil frictions only, and is at once enveloped in a soft warm blanket.

The former elaboration of finery in dress for the young child should, in all cases, give place simply to a canton flannel gown, a buttock napkin, and the "belly-band."

The eyes and mouth should be carefully washed with a *new* sponge and warm water. Should there be a reason to suspect any specific or unclean condition of the mother's genitals, the eyes should be treated to a drop of Corrosive sublimate, 1 to 4000, or a drop of nitrate of silver solution, 1 per cent. strength, to be followed by a 10 per cent. solution of Boric acid, three times a day as a lotion, for one week. This precaution may save the practitioner as well as the child from the horrors and consequences of *ophthalmia neonatorum*.

If the child be a male, carefully examine the aperture of the foreskin, and if very narrow dilate at once and completely expose the *glans*, in order that it may be kept clean and that there shall be no phimosis.

And now, Mr. President and Members of the Congress, the limited space and time which I may prudently occupy on this occasion, when there are so many others with something valuable to say, have only allowed me to cast about and touch points of interest and importance in the most casual way. If I have in the smallest degree contributed to your entertainment, I shall feel profoundly thankful for the use I may have been able to make of my opportunity. In any event, allow me to indulge the hope that you will at least esteem me diligent and conscientious in the discharge of the duty you have imposed upon me—Quod Erat Demonstrandum—Amen.

SCARLATINA IN THE GESTATIVE AND PUERPERAL STATES.

By John C. Sanders, M.D., Cleveland, Ohio.

Of all the varied zymotic maladies possible to the gestative and puerperal states of woman there is none more obscure in its ætiology, or ambiguous in its symptomatology, or problematic in its diagnosis, or more freighted with peril in its issue than scarlatina, which has been chosen as the theme of this brief paper. Scarlet fever may attack either the gestative or the puerperul state. We will consider the subject in this order:

I.—As declaring itself in the gestative state.

If the exposure to the infection has occurred in the early months of gestation the attack follows not much beyond the average period of incubation in the non-gravid state, and predominantly is inductive of abortion. That this should occur doubtless depends on two causative conditions; one is the exceeding high temperature of the maternal blood, for no other fever carries so high a temperature either in adult life or childhood, and this alone would very surely compromise embryonic life, and another is the doubtless direct toxic effect of the virus on the embryo, for it admits of no question that the embryo becomes infected through the virus, of which the mother's blood can be the sole bearer.

The attack is inaugurated most universally with a severe chill, and with or without more or less severe anginal symptoms, early declared fever ensues, characterized by exceedingly high temperature, carrying the mercury up to $103\frac{5}{10}°$ Fahr. to 104° and $104\frac{5}{10}°$ Fahr. and all this within the period of twenty-four hours. In case anginal symptoms accompany, the attack is more often imputed to cold, so called, or some special and extreme meteorological changes. The fever will rage on hardly longer than thirty-six or forty-eight hours when abortive phenomena ensue, with a declared rash on face, hands, and arms. The discharges from the womb soon become tainted,

either patent or detectable only on close observation. The rash runs down over the body and limbs and feet not uniformly in one unbroken blush, but in detached areas. As the rash extends the febrile phenomena continue with increased intensity, complicated and blended with the metritic irritation and distresses of the abortive act. The intense blood heat, the thirst, the dry tongue and mouth, the burning or stinging or itching rash, the uterine suffering, the offensive discharges lochial or otherwise, the vigilance and restlessness and more or less delirium, make the case extreme and critical. Here will arise, if not before, the problematic question of the greatest import. Is this rash, faintly outlined it may be, and occurring not in a continuous blush, but in detached areas, zymotic from scarlet fever infection or is it the skin discoloring of septic poison? Is the case, in brief, one of zymotic or non-zymotic puerperal fever? There is demanded the most searching and exhaustive inquiry into the history of the patient and family with the view to determine the exact provocation of the attack, whether it was autogenetic or heterogenetic. For the infection may have run through very circuitous and unexpected routes.

Apart from the presumptive evidence of a clearly defined tracery of exposure to scarlet fever infection there are points of differential diagnosis that will contribute to the solution of the problem.

1. In scarlet fever infection the onset and progress of the puerperal fever are more violent and carry a higher average temperature.

2. The anginal symptoms, if any accompany the case, are more extreme than what pertains to a non-specific sore throat.

3. The tongue becomes red and dry much sooner and more papillary than in septic fever.

4. The rash rarely appears until after the abortive act is completed, so far as the loss of the embryo is concerned, but appears earlier than the rash of septic infection would declare itself.

5. The rash or skin discoloration is a different rash and closely examined is found more diffused and miliary in character which is not true of septic staining of the skin.

II.—As declaring itself in the puerperal state.

If the exposure to scarlet fever occurs in the later months of gestation, the infection may remain and is prone to remain a latent, dormant force until labor at full term is declared and completed,

but immediately thereafter will burst forth in form of a declared puerperal scarlet fever. This incubation may have an extension back away to the seventh and a half and even to the seventh month, and give no evidence whatever of itself for this protracted period, as has occurred in a case of recent experience of mine. The mother had been called upon by a neighboring friend at this date of her gestation, whose sister, very ill with scarlet fever, she had visited and nursed. This was, in her case, the only possible source of infection, as was determined by the most searching inquiry. For nearly two months the infecting virus had remained in dormant incubation and manifested its true character not until twelve hours after delivery, when there was first noticeable a rash on the mother's face, which gradually extended to her neck and throat, arms, wrists and back of hands, and in twenty-four hours the entire body became stained with the rash. The fever was inaugurated with the rash and intensified with its extension, carrying the temperature to $104\frac{5}{10}°$ Fahr. in twenty-four hours, with all its ordinary phenomena. No anginal symptoms appeared. The itching and burning of the skin was extreme. Her lochia became exceedingly tainted; her milk fully formed but rapidly disappeared, though partially returned after established convalescence which took place at the expiration of the middle of the second week. On the morning of the second day her babe, fair of skin at birth, showed the same rash phenomena with the mother, and became covered from head to foot; its fever gradually increased as the rash progressed. The babe survived and became convalescent soon after the mother's restoration to normal temperature. The exfoliation in the two cases exceeded anything I had ever before seen.

The problematic question in this case was, what was this fever? Was it septic or zymotic? Here was a woman apparently perfectly well at the close of her gestation, and whose labor was primiparous and every way natural, at the end of twelve hours gave evidence of febrile symptoms and whose face showed stains of rash, and at the end of thirty-six hours carried a temperature of $104\frac{5}{10}°$ Fahr., whose lochia became checked and very offensive and whose breasts collapsed with entire loss of milk. Anxiety and alarm gathered around the case, and the matter of diagnosis as well as prognosis became serious and embarrassing. Reliance was put upon the diagnostic points before made, but one of the factors was wanting.

There had been no conscious exposure. Not until several days after the case had been designated scarlatina, were the facts recalled of the neighbor friend's ill-timed visit, while nursing her sister, very ill with the malady. This at once poured a flood of light upon the case and removed all ambiguity.

One object of this brief paper is to awaken a caution which I am convinced has been too little heeded by the profession at large, as to the exposure of the gestative woman to this very common zymotic malady, freighted as it is with such grave suffering, such embarrassing problems of ætiology and diagnosis and such imperiling possibilities both to the mother and her embryo or child. Against any such exposure the gestative woman should be guarded to the limit of every possibility.

Another object is to bring into prominence the surprising possibility of so protracted and so dormant incubation of the infecting virus, as the full appreciation of this possibility may furnish a key to some puerperal histories, that carried to their isssue, whether of resolution or death, unsettled questions as to their exact character.

Another object is to elicit expressions of opinion with the view of determining what shall be regarded as indisputable diagnostic evidence by which we can unerringly differentiate between the rash of true scarlatina as affecting the gestative and puerperal states, and the rash that is contingent upon septic poison.

THE HABITUAL DEATH OF THE FŒTUS IN UTERO.

By E. S. Bailey, M.D., Chicago, Ill.

Mrs. ——, age twenty-eight years, American, large and strong, came to my clinic February, 1893, and asked this question: "Why is it that I cannot give birth to a living child?" The history she gave was as follows: She had been married eight years; had always had perfect health, never having employed a physician except as an accoucheur; never had taken any medicine, and says that she is in perfect health now. Except at confinements she had never been ill, and had recovered promptly and perfectly from four labors. She looked the picture of health, but her misfortune had caused a deep melancholy. She returned three times, and with all the quizzing I could give or examinations I could make, I could not find any cause for her unnatural labors.

Turning my attention to the possibility of the husband's health as a factor in the child's death, I could not discover that he had ever had any disease that could have accounted for parental influence causing immature children. In detail, let me say that the mother had conceived and carried without inconvenience, up to the time of the fœtal death, in a perfectly natural manner. She never had shown a sign of: 1. Syphilis; 2. Anæmia; 3. Uterine disease or of any of its appendages; 4. Uterine displacement; 5. Cellulitis or peritonitis; 6. Laceration of the cervix; 7. Fevers; 8. Chorea; 9. Bright's disease; 10. Tumors; 11. Poisoning from lead, arsenic, etc.; 12. Icterus or liver diseases; 13. Traumatisms; 14. Overwork; 15. Reflexes, as headaches, nausea; 16. Intemperance; 17. Narcotics or opiates; 18. Heredity did not influence her case, as all of her sisters are mothers; 19. Abortions at an early date; 20. Kidney lesions, non-inflammatory. Any one of these causes have been deemed sufficient to cause fœtal death.

On the husband's side, he had never suspicioned that he had in any way had: 1. Syphilis; 2. Nephritis; 3. Diabetes; 4. Phthisis;

5. Cancer; 6. He was in the prime of life, never had been intemperate; 7. No eruptive diseases; 8. Brothers were fathers; 9. No malaria; 10. No tobacco or lead poisoning. In fact, it was difficult to obtain a single clue to any physical defect through indiscretions or disease.

We next turned attention to the cause of death of the fœtus, as each miscarriage was due to the presence of a dead fœtus in utero. The first child she carried during eight months of gestation. When born, it had been dead several days. The second child was born at the fifth month, the third at the seventh month, and the fourth at the eighth month. All the children seemed perfectly formed, were not macerated, and, so far as the patient could tell, there were never any marks of syphilis. Once the attending physician said that there was something the matter with the cord, but she never had any explanation given her, and renewed the question fervently: "Why can I not have a living child?"

These cases, so far as the aggregate in literature is concerned, are not especially rare, but they do not occur frequently in individual practice. Each practitioner could probably narrate one or more cases, but taken as a class of cases they are rare. Two pertinent questions arise here: What are the causes? What can be done?

The answer to the first question, as found in the recent literature, is very briefly condensed in the following list of causes of death of the fœtus: A. *The premature detachment of the placenta*—1. Through traumatism; 2. Violent exertions; 3. Infective fevers; 4. Nephritis. B. *Diseases of the placenta*—1. Syphilitic; 2. Infective fevers; 3. Tuberculosis; 4. Apoplexy; 5. Infarct; 6. Torsions; 7. Inflammatory changes; 8. Fibrous bands. C. *Diseases of the fœtus*—1. Torsion of the cord; 2. Obliteration of the bloodvessels of the cord; 3. Partial or incomplete development of the cord; 4. Irregularities or abnormalities in its placental attachments; 5. Thrombus; 6. Mummified fibrous cords; 7. Fatty degeneration of the cotyledons.

What can be done? The answer is plain. The majority of these cases will trace out to be either syphilitic or else to be accounted for by the velamenatous insertion of the cord. The former is recognized best by microscopical examination. This examination should be made immediately after the expulsion of the placenta. The presence of gumma or syphilitic nodules is the true test. Fraencle has never

been able to demonstrate syphilis of the placenta earlier than the sixth month.

The marginal attachment of the cord and the white infarct of the placenta or the various torsions are beyond the power of the diagnostician or of any form of medical interference. In the cases where the lesion exists, as in the nerve-centres or circulatory system, hygienic conditions and constitutional treatment is the only form of treatment that promises any measure of success. In the cases similar to the one I refer to, there being no lesions, I would try the treatment usually known as the anti-syphilitic, using Mer. cor., 6x trit., once daily for some months.

In case the lesion is syphilitic, repeated pregnancies have been known to have the effect of elimination, and the mother may finally give birth to a child viable and full of promise.

I have condensed my paper to a mere outline, but as there is little likelihood of a discussion, it will not have taken long to have mentioned the outlines of this subject.

Discussion.

Dr. Ludlam: Ladies and Gentlemen, I inquired of the professor whether my colleague mentioned mental shock as a cause of abortion. We all know, I think, that this is a cause. There is such a long list of causes he overlooked this, I think. Mental shock often induces this result, but that there are causes that might accidentally have the effect there is no doubt. Dr. Bailey's subject is, however, as I understand it, the habitual abortion that occurs over and over again in the same patient. The impossibility of the woman, such as he cited, giving birth to a living child—the affliction which she must undergo under those circumstances in not becoming a mother—is surely terrible. Surely, if there is anything we can do in such a case or anything we can suggest as a means of preventing such an experience, we ought to study such a question very carefully. For my part, I think there are times in cases not having gone quite so far as these where I have induced early labor, and the mothers have been blessed with living children. I suggest that we might think of this thing a little oftener than, perhaps, we have been inclined to do, because it is expedient and is more justifiable now than it ever was before.

Dr. Foster: I would like to offer a suggestion or two with reference to such a case. It would seem that all of the well-known causes of the death of the child in utero have been pretty well considered, and were well considered, I think, in the paper read by Dr. Bailey.

There is another possible cause, however, to which I would like to call attention. Perhaps it might be valuable. Perhaps I might put it in this way: I would say that the woman would, perhaps, have a better chance of giving birth to a living child if she had another husband. There have been such instances on record. Where either parent is not fruitful, he or she is likely to be in a subsequent marriage. We see a similar state of facts oftentimes in the vegetable world, where we will find a little piece of ground that will always fail to ripen its fruit. It will permit a certain kind of fruit to grow until before it has reached maturity. Other kinds of fruit it will mature. I am under the impression that this case of Dr. Bailey's comes somewhere in that line.

ARTHUR FISHER, M.D., Montreal, Can.: To me there would be a suspicion of constitutional conditions, and if I could not do anything else, I would be strongly inclined to treat with sulphur and perhaps with other remedies.

THE LEVATOR ANI AS RELATED TO PARTURITION.

By Henry Edwin Spalding, M.D., Boston, Mass.

There seems to be a general misconception concerning the anatomical structure and functions of the normal levator ani, and little appreciation of the influence it may exert on child-birth, and of the accidents to which it is liable.

Being generally disregarded when normal in character, it naturally follows that it is often overlooked when abnormally developed, and the evil consequences resulting from its injury not generally understood.

Enclosing, as it so nearly does, supplemented by the coccygeus, the pelvic outlet, it has been called "the diaphragm of the pelvis."

In most cases it is so thin as to be nearly membranous, its fibres being arranged in flat bundles, loosely held togsther, with here and there spaces filled with fat and connective tissue. This peculiarity of structure adapts it most favorably to bear the strain and distension incident to child-birth.

The levator ani has its origin in part from the bones and in part from the fascia of the pelvis. Of those portions having a bony origin the larger and more important is that coming from the horizontal ramus of the pubes. This portion, moreover, most interests us as obstetricians.

The anterior edges of this muscle do not meet at the symphysis, but are separated by a space of about an inch. The portion arising from the pubes is, at its point of origin, about one and one-half inches wide, and its insertion is about one and one-fourth inches below the upper border of the ramus.

This bundle of fibres is much thicker than the rest of the levator, and its edges are so thickened and rounded as to itself resemble, to the touch, two independent bundles of fibres. In some cases it becomes so hypertrophied as to give rise to severe vaginismus and dys-

tocia. Following the origin backward from the pubic ramus it is found to arise from a crescentic-shaped line of fascia extending to the ischial spine, whence arises that smaller portion which has a bony origin. The portion arising from this curved line of fascial origin is strengthened by the pelvic fasciæ, the tendinous fibres of which are flattened and spread out upon both its upper and under surfaces.

The course of this muscle is downward and backward, and, except a small bundle of fibres, extends back of the rectum. That which passes anterior to the rectum is a bundle of fibres only a few lines wide. It has its origin at that point of pubic attachment farthest from the symphysis, and, crossing the larger belly of muscle in a diagonal direction, is lost in the recto-vaginal septum about half an inch from the anus.

While usually in women this portion of the muscle is quite small, in some instances it is markedly strong and hypertrophied, as may be proved by careful recto-vaginal examination. With the exception of this bundle of fibres, that portion arising from the pubes, which, as we have said, is the largest, extends as one continuous strip of muscular tissue from its origin on the ramus of one side down alongside the vagina, to which it is attached by strong connective tissue and by an interweaving with some of the longitudinal muscular fibres of the vagina around the back of the rectum to its point of attachment on the ramus of the other side. Some of its fibres are interwoven with the longitudinal fibres of the rectum, but, as in the walls of the vagina, they do not lose their identity. This band is intimately connected with the sphincter ani, some fibres crossing or interweaving with some of the sphincter fibres, which are inserted into the dorsal surface of the coccyx. As the muscle spreads out towards the coccyx its bundles become flatter and thinner. It hugs the concavity of the curve-end of the rectum and supports it from below. The middle portion joins its fellow by aponeurosis at the point of the coccyx. The smallest and posterior portion is fixed by tendinous attachment to the fourth coccygeal vertebra.

The functions of the levator are primarily to aid in defecation. In woman, however, it has other functions. It draws the anus and posterior wall of the vagina towards the symphysis, and during coitus, as a vaginal constrictor, presses the penis firmly against the os tincæ.

In strength it varies greatly, it being found strongest in women of strong muscular build, of erotic disposition, with wide pelves, and in those suffering from painful lesions around the vulva and anus.

By careful experiment the average lifting power has been found to be ten pounds, while in some it is as high as twenty-seven pounds. There are reported instances of tonic spasm of the muscle during copulation so strong as to require anæsthesia for the release of the imprisoned penis.

This abnormal development and increased strength of the levator is not infrequently called upon to compensate for other defects. A woman past eighty years, while ill from other troubles, complained of piles. Much to my surprise I found a complete laceration of the perinæum. I had known her for fifteen years as a remarkably smart and robust old lady. She had borne several children, and I could not learn that she had ever suffered from uterine trouble or incontinence of fæces. The womb was certainly then in normal position. The levator was very strong, and so contracted as to draw the anus well forwards towards the symphysis, thus perfectly compensating, as far as support to the vaginal walls and womb were concerned, for the destroyed perinæum; and what seems more remarkable, had so closed the anus that the loss of the sphincter had caused no inconvenience.

Not long since I examined a patient with perinæum gone to the sphincter; she had suffered nothing from want of support to the organs above. As in the former case, the strong levator had so drawn the anus forwards as to form a substitute for the perinæum. Whether a rectal polypus has been a constant whip to keep the levator in a state of contraction cannot be said. Only lapse of time—now that the polypus has been removed—can answer, which it will have a chance to do, since she can see no necessity for having the perinæum restored.

In ordinary cases its dystotic power, when it is not abnormally strong from hypertrophy, may not seem very great.

Physiological relaxation, paralysis from continued tension and from compression all tend to reduce its opposing power to the minimum. A careful comparison of the levator, reinforced, as it is by firm fasciæ, with the diaphragm, will show that its average resisting power is not inconsiderable.

As before stated, however, we not infrequently find the levator greatly strengthened by hypertrophy. This is most marked in the anterior portion that has its origin from the rami of the pubes and exerts the most power in drawing the anus and vagina forward towards the pubes. The hypertrophy may, however, involve the entire muscle or only independent portions of or bands of fibres.

It is claimed that the levator ani usually becomes hypertrophied during pregnancy. Painful lesions in the anus, like piles and fissures—which are so frequent a complication of pregnancy—tend to keep the muscle in a state of active contraction, which is promotive of hypertrophy. This condition of the anus, irritated by the pressure from the approaching part, may set up a tonic contraction of the levator. Not infrequently labor progresses naturally, with promise of a speedy delivery, until the presenting part comes in contact with the floor of the pelvis—in other words, with the levator ani. Pain succeeds pain, each causing the presenting part to press firmly upon the opposing tissues; but in the interval between the pains it recedes to its former position, no advance being made. The muscles of propulsion, already wearied by long-continued effort, meet a fresh and untried opponent. The naturally stronger yields, through fatigue, to the weaker. The pains lessen in force and frequency. Longer delay places the life of the child in jeopardy, and the hot, dry vagina, quick pulse, wearied yet anxious face of the mother call loudly for her relief. Now, or even before this extreme condition has been reached, the very short forceps (Hale's) are most useful. Being small, with almost no shank between the blade and handle, they can be easily adjusted and often without the knowledge of the patient. Then, if just sufficient traction be applied to prevent the presenting head from receding in the intervals between the pains, the levator is kept in a state of continued tension, with such paralyzing effect as to soon cause it to lose its power of resistance, and the delivery is accomplished easily.

If, however, hasty delivery be demanded, anæsthesia should be carried to the surgical degree, in order to produce complete relaxation of the muscle and avoid rupture.

In case the anus be sensitive and painful, from fissures or ulcers, complete anæsthesia is of vital importance; for, as all rectal surgeons know, putting a sensitive anus on stretch will arouse violent reflex muscular action, which can only be overcome by complete anæsthe-

sia. If this precaution be not observed, the levator, being in a state of tonic contraction, delivery will most likely be accomplished with a rupture of the perinæum and some portion of the levator ani.

A strong and contracting levator is responsible for many cases of detention of the after-coming head. The body having been delivered, the muscle contracts around the neck, retaining the head, to the extreme hazard of the child.

Budin reports a case. The body was delivered, after much delay, by the aid of Ergot, traction and expressio-fœtus. Forceps finally delivered the head without lacerating the perinæum, but the levator was badly torn. No sutures were used, and the result was entire loss of power in the levator muscle.

Cases of most aggravated obstruction have been reported as the result of extreme thickening and shortening of the levator.

Benicke reports a case where such muscular changes had taken place, as the result of long-continued vaginismus and contraction, that forceps, under chloroform, were unavailing, and craniotomy was resorted to. Cases of this kind must be rare.

The levator may present abnormalities in the shape of irregular thickening of the muscles, presenting constrictions like tendinous bands.

Revillout speaks of a case where a ring or bridle was found within the vagina which prevented the application of forceps. Believing the obstruction to be a band of cicatricial tissue, it was incised. The autopsy showed that it was the levator. She had suffered from extreme vaginismus.

A case, unique, as far as I can learn, occurred in my practice. Mrs. S——, age 39; primipara. Just within the vagina was one, and a little farther up a second sharply-defined, constricting cord. They were like two puckering strings, firm and unyielding. The vagina seemed gathered in folds upon them, but otherwise normal in texture and yielding. Digital examination was not only painful to the patient, but made her peculiarly nervous. The constriction was not so great as to in the least interfere with the introduction of the finger, but even slight pressure upon those constricting bands was unbearable. Other than this, labor progressed normally until the head entered the pelvic canal and began to press upon the upper constricting band, when, in the midst of a pain, without warning, she went into a violent convulsion. With the aid of ether and for-

ceps the delivery was speedily accomplished, with no subsequent convulsions. The perinæum was ruptured to the anus, the irregular tear extending up the vagina past the site of the upper ring. Sutures were used, but how near the repair put the parts in a normal condition I cannot say, never having her under my care since. Some two years afterwards, in a distant city, she was delivered of a still-born child, after a hard labor, but without any convulsions.

Lesions of the levator are of frequent occurrence, and are often overlooked at the time, since they are within the vaginal canal, and the cutaneous perinæum may show no signs of injury, or the laceration may extend through the perinæum and up the vaginal canal. A careful examination will show that beyond the perinæum the laceration is more or less ragged and irregular and deflects to the right or left of the median line. When we consider how the levator is reinforced by the intervening rectal walls and the peculiar interweaving of the longitudinal rectal muscular fibres with portions of the levator, we see that the most vulnerable part of the levator must be just before it reaches this adjunct of strength.

This fact makes repair less liable to be perfect, as the deep sulci so often found on one or other latero-posterior vaginal wall proves. In fact, except the band of fibres—unusually small and unimportant—that crosses diagonally the larger belly of the levator arising from the pubic ramus, it is anatomically self-evident that the levator will not be torn at the median line. The torn muscle retracts, and if discovered at the time of injury, it is not an easy matter to so close the wound as to bring the ends of the lacerated muscle in perfect adaptation, which certainly should be done. If neglected, we have a pocket for the collecting of septic matter, which even the free use of the vaginal douche may not remove. If left to heal by slow granulation, it is usually with a partial or complete loss of power in the levator. Sometimes there remains a cicatrix that is specially sensitive, some nerve filament being so incarcerated in it as to be in a constantly sensitive condition. This may be revealed to the patient and physician only by the educated touch of the examining finger, while it may have been a nidus, from whence had radiated neurotic and other troubles for months and years.

Often, we believe, there is a concealed submucous laceration. There being no break of continuity in the mucous surface, the injury is only discovered by the sulcus caused by the retracted ends of muscles, and by the impaired function.

Not infrequently in suturing a lacerated perinæum at the time of accident the wound is not brought together evenly and the torn muscle is distorted from its normal line. The circumstances attending the case and the absence of efficient assistants makes this result, while to be deplored, in a degree excusable as far as the medical attendant is concerned, and the wonder only is, that the results are generally so good. The gynæcologist must often come in and undo what has been imperfectly done.

Mrs. ——, primipara, as the result of a tedious and difficult delivery, had complete rupture of the perinæum and a portion of the recto-vaginal septum. Stitches were immediately inserted. For a few months there was a constant sense of pulling in the parts, especially in walking and in sitting down or rising from a chair. This she came to notice less and less. Hæmorrhoids developed. Defecation was somewhat difficult and attended by discomfort in the anus. At the end of ten months coitus had become very painful and was soon unbearable. Nervous hysterical symptoms began to show themselves, and at the end of sixteen months from the date of delivery, when she came into my hands, she was physically and mentally in a most miserable condition.

Physical Examination.—Externally the perinæum seemed fairly well restored with the exception that the vaginal commissure was drawn to the right of the median line. Pressure near the anus and near the os vagina caused a sharp lancinating pain. Within the vagina the perineal wall was a hard uneven cicatrical mass. A line of firm tissue, tensely drawn, extended from the right anterior to the left posterior wall of the vagina, and was there incorporated in the cicatrix. It was evidently a portion of the levator ani, that in the suturing of the ragged wound had become misadjusted. It caused a partial occlusion of the vagina, and by constant traction upon the left vaginal wall produced a deviation of the commissure to the right. Pressure upon it caused a sharp pain to extend upwards into the pelvis and a sickening feeling in the epigastrium. There was a stricture of the anus, the anterior wall being hard cicatrical tissue. There was subinvolution, but otherwise the uterus was in a normal condition.

Operation.—I dissected out the vaginal cicatrix, thoroughly releasing the misadjusted muscle. Removed sufficient mucous membrane so that when the raw surfaces were coaptated the normal wedge-

shaped body of the perinæum would be restored. The mucous membranes of the opposing sides were united with a continuous catgut suture, and the denuded surfaces were held in apposition by two deep catgut sutures within the vagina, and one silver suture introduced from the perineal surface and encompassing the whole field of operation.

The anus was dilated, the cicatrix removed and the healthy mucous membrane dissected up like a crescentic-shaped pocket, the deepest portion being about an inch, and but little at its juncture with the integument on either side of the anus. This flap of mucous membrane was then brought down over the site of the removed cicatrix and sutured to the integument. The result has proved satisfactory to patient and surgeon.

A COMPARATIVE STUDY OF THE OPERATIVE PROCEDURES APPLICABLE TO THE COMMONER VARIETIES AND DEGREES OF PELVIC DEFORMITY.

By L. L. Danforth, M.D., New York City.

There is no subject in the whole field of obstetrics which receives so little attention in our Society discussions as that of pelvic deformities. To the relative infrequency of these abnormalities as compared with other obstetrical complications may be attributed the neglect which this subject receives. Though seldom encountered in practice, we are not justified in totally neglecting this important branch of obstetrical study.

The writer has endeavored to ascertain the frequency of pelvic deformity in lying-in institutions in this country, wherever statistics have been published, and as a result interesting information has been obtained.

In a series of 2127 cases of labor in the out-patient department of the Boston Lying-in Hospital, Dr. Edward Reynolds* found 22 instances of pelvic deformity, and in 100 cases of confinement in the wards of the same institution five cases were observed. Dr. James W. McLane reports 10 cases in the first 100 cases of confinement in the Sloane Maternity.

In 3225 cases of confinement attended by students at the lying-in hospital in New York City, during the first three years of its existence, in only one instance was reduction in size of the fœtus demanded on account of a contracted pelvis. In another, premature labor was induced on account of a contraction of the pelvis in all its diameters; in not a single instance did the absolute indication for Cæsarean section exist from any cause. Pelvimetry is systematically employed by the students of this school. This is a remarkable record, and

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* *Transactions, Am. Gyn. Soc.*, 1890.

shows a much smaller percentage of cases of pelvic deformity than is generally supposed to be the case. Dr. Edgar states, with regard to the cases (1154) confined during the first two years in their lying-in hospital, in not a single instance did a markedly contracted inlet exist. He does not say that there were no cases of pelvic contraction to the minor degrees, and it is not assuming too much to suppose that some of the forcep operations and cases of version were performed on account of the small size of the pelvis.

In 250 cases of labor in private and consulting practice of which the writer has record, there were three cases of contracted pelvis; one simple flat pelvis and two symmetrically small pelves. The latter—the justo-minor pelvis—is the variety most frequently seen in women of American birth.

Among the 100 cases in the wards of the Boston Hospital, referred to in Reynold's tables, there were 57 native women who presented one case of pelvic deformity, and that of a typical justo-minor type, the percentage of 1.75 per cent. being almost identical with that obtained among native women from the out-patient department of the same institution and the obstetrical department of the Boston Dispensary, which was 1.6 per cent. In contrast to this the remaining 43 foreign women yielded four examples of the simple flattened pelvis (9.4 per cent.) and no justo-minor pelvis.

Among Reynold's 2127 women of all classes, 10.3 per cent. possessed contracted pelves of one variety or another. Abroad, the average is about the same. Winckel says:* "After all pregnant and parturient women were carefully examined as regards their pelvic relations, there were found, among 1199 births, 115 women with contracted pelves (9½ per cent.), a figure which coincides exactly with those obtained of late years in the Werzburg clinic (8.10 per cent.), and approaches closely to those obtained by Michaelis and Litzmann."

The first regular pelvic measurements were made in 1840–1847 by Michaelis, of Kiel, who found in 1000 parturients 131 cases of narrow pelvis (10.3 per cent.).

Litzmann (1848–1886) found in 1000 parturients 149 (10.4 per cent.). Subsequent observers up to Winckel's time found a much smaller number of cases, but the difference is undoubtedly due to

* *Text-Book of Midwifery*, p. 451.

the fact that more than half the cases of slight narrowing were not recognized because they produced no difficulty in labor. Winckel concludes that "we shall not go too far in making the statement that contraction of the pelvis is present in 10 to 15 per cent. of all parturient women, but that usually only about 5 per cent. are recognized even in clinical institutions on account of the effects upon labor." This would seem to be about the frequency in this country if we include all classes. Women of American birth are undoubtedly less frequently the subjects of pelvic narrowing than those of foreign birth. Furthermore, it may safely be concluded than an American birth decreases the amount of pelvic deformity among the children of foreign parents.

The predominance of the rachitic types of deformed pelves, characterized by irregularities in shape of the whole pelvis and especially by flattening of the inlet by undue projection of the promontory among women of the lower classes born abroad, is probably due to insufficient nourishment and hard work before or during puberty.

The symmetrically small pelvis, due to simple arrest of development at puberty (a partial persistence of the infantile type), is the variety generally met with in women of American birth and lineage, and is due, as might be expected, to the peculiar character and habits of American women and nineteenth-century civilization.

In the practice of midwifery, the following questions are now and then presented for solution:

1. Is there any external evidence or anything in the progress of a labor in its early stage which will enable one to suspect the presence of a pelvic deformity?

2. What constitutes pelvic narrowing, and how are we to determine that such a condition really exists as well as the variety and degree of the deformity?

3. Is it possible to ascertain, before labor sets in, the relation of the presenting part of the child to the narrowest diameter of the pelvis through which it must pass to accomplish delivery?

4. Can we define, with any degree of certainty, the limitations of the different operative procedures by an approximate estimate of the extent of the narrowing?

I shall endeavor to answer these questions *seriatim:*

1. With regard to the significance of physical peculiarities in pointing out the possible existence of pelvic deformity.

While narrow straight hips and short limbs may not prove to be indicative of diminished transverse and oblique diameters, the fact that such peculiarities of shape coexist should not be overlooked. As Spielgelberg says,* when he emphasizes the importance of making pelvic measurements: "Still, the other circumstances deserve that full weight be given them, and even if they never afford more than certain *points d'appui*, suggestive, to a certain extent, of the direction in which measurements should especially be made, they nevertheless assist in deciding the best treatment for special cases."

An unusually short person, or a tall, slender woman, with very narrow hips, or lameness due to diminished length of one leg; women with abnormal curvature of the spine, or undue hollowness of the back, which is usually the external evidence and accompaniment of excessive inclination of the pelvis; none of these peculiarities shonld escape the eye of the careful obstetrician. They may mean nothing, or they may be suggestive of more serious defects, the detection of which, by more extended observation, will enable one to act intelligently at the time of labor, and thus possibly save a life which, without such preliminary knowledge, might be sacrificed.

The life-history of a woman with a spinal curvature or other evidences of defective development should be carefully scrutinized to ascertain if rachitis existed during childhood.

If physical peculiarities do not exist, or have been overlooked, the conditions revealed by an examination at the onset of labor may be of great value in pointing out the presence of contraction.

Failure to reach the presenting part, the non-descent of the head and the resulting protrusion of the elongated bag of waters under the influence of the uterine contractions, and the imperfect adaptation of the head to the lower uterine segment, are conditions so suggestive of either an abnormal presentation or a pelvic contraction that a discriminating diagnosis should at once be made.

The occurrence of constriction or retraction rings after rupture of

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* *Text-Book of Midwifery*, vol. xi., p. 30.

the membranes, without advance of the presenting part, is evidence of obstruction, and the continuance of natural labor under such circumstances only adds to the difficulties which already surround the case.

The symmetrically small pelvis (the justo-minor pelvis) has scarcely any external signs by which we may detect it except, perhaps, narrowness of the hips in a woman otherwise of normal proportions, though it would be more natural to suspect its existence in a very short woman. Rachitis, which causes the flat pelvis, or the generally contracted flat pelvis, does not always produce pelvic deformity in proportion to the intensity of the disease apparent in other parts of the skeleton, and sometimes it produces no pelvic deformity whatever.

A woman with a decided spinal curvature may have a perfectly normal or even a large pelvis, the location of the deviation of the bones being of more importance than the degree of it. Again, a woman may have a slight degree of pelvic deformity and yet be delivered spontaneously and successfully, especially in a first labor, the ability or failure to do so depending upon the relation which the child bears to the contracted portion of the pelvis through which it must pass in order to be delivered.

2. What constitutes pelvic narrowing, and how are we to determine that such a condition exists, as well as the variety and degree of the deformity?

One of the most important advances in the teaching of practical midwifery is in the direction of systematic examinations of the pelves of pregnant women by means of the pelvimeter, the tape, and, most important of all, by the hand of the examiner within the pelvic cavity.

Every physician who does much obstetrical work should familiarize himself, in the first place, with the shape of the normal pelvis by examining the pelvic cavity carefully with regard to its sacral curve, depth of the lateral walls and of the symphysis pubis, the inclination of the pelvis and the degree of projection of the sacral promontory.

External measurements are not of great value, because we cannot estimate exactly the thickness of the intervening bones or of the soft parts. Still, conclusions can be formed which will enable one to determine approximately the development of the innominate

bones, and the width of the transverse diameter of the pelvic inlet. The same remark applies with equal propriety to the external measurements of the conjugate at the brim, which is taken from the spinous process of the last lumbar vertebra, to the upper border of the symphysis, and should measure not less than 17.5 cm. (or seven inches) in the living subject.

The internal method with the left hand in the vagina, is the method which gives most accurate information, and the greater the contraction the more reliable is the result. This method is practiced as follows: With the fore- and middle fingers of the left hand in the vagina the promontory of the sacrum is touched. Then keeping the middle finger on the promontory, press the side of the forefinger against the lower edge of the symphysis. The forefinger-nail of the right hand is then placed where the examining hand is touching the symphysis. Remove the two hands together without separating them, so that the finger-nail may accurately mark where the hand was in contact with the symphysis. An assistant then with a tape measure or rule, measures the distance between the tip of the middle finger and the place where the side of the hand touched the lower edge of the symphysis. The distance is the *diagonal conjugate* and it usually measures half an inch more than the true conjugate which, as is well known, is four inches.

Now, one would naturally suppose that a contraction of the conjugate below four inches must exist to constitute pelvic deformity. As a matter of fact, however, the conjugate may measure four inches, and if the other diameters are reduced so that the inlet is nearly round, as in the generally small pelvis (the justo-minor type), an obstacle to the progress of labor may be encountered at the superior strait. On the other hand, lessening of the conjugate at the brim to three and three-quarter inches or even to three and one-half inches (Winckel) as in the simple flat pelvis (the other diameters being normal) no obstacle to deliver will occur, and the deformity may remain unsuspected, although the mechanism of labor is generally altered. It is only in unfavorable complications such as would occur with a large fœtus or an abnormal presentation, that serious disturbance of labor is observed.

In consequence of these peculiarities, some authors, and especially those who obtain the lowest percentages, recognize as abnormal only those cases in which arrest occurred in pelves where contractions

were three and one-half inches or less. While those who find deformity most frequent admit to their tables only those pelves whose conjugates are diminished by only one-fifth of an inch. For practical purposes we may say that dangerous contractions exist in the generally small pelvis, though the conjugate measures full four inches, and in the flattened pelvis with ample transverse space when the conjugate is reduced to three and one-half inches.

The difficulties met with in the delivery of a child through a conjugate of four inches in the symmetrically small pelvis may be explained by the fact that the transverse diameter in a pelvis of this variety, is no longer, and may not be so long as the antero-posterior; hence diminution of the oblique diameter and greater difficulty in effecting an entrance of the head than would be the case with even a shorter conjugate and more transverse space. Besides in these cases the obstruction to labor is not limited to the superior strait, but continues through the whole pelvis. The mechanism is that of early and complete flexion, with occasionally a delay in rotation from decreased inclination of the inferior pelvic planes—and the increase in the length of the pelvic axis.

These remarks apply with almost equal force to the *generally contracted flat pelvis* as regards the obstacle to labor at the superior strait, since internal palpation shows the transverse space at the brim to be diminished almost as much as the conjugate. A generally contracted flat pelvis with an antero-posterior diameter of four inches, is therefore capable of giving rise to as much difficulty as the symmetrically small pelvis of the same conjugate diameter. Normal labor is possible in either of these varieties of pelvis, though usually assistance by means of forceps is required. The characteristices of the *simple flat pelvis* is the shortened conjugate diameter, extreme contraction being uncommon, the length of the conjugate rarely falling below three inches. This diameter may not fall below three and three-quarter inches, and when diminished to this slight degree only, labor may terminate without instrumental assistance, though version and forceps are alternative operations which often come into competition with each other.

3. *The duty of the obstetrician when confronted by a contracted pelvis is to form as accurate an idea as possible of the type and measurements of deformity he has to deal with, and at the same time determine approximately the size, shape, and consistence of the infantile head.*

If the gestation has advanced to full term, we know what the average measurements of the fœtal head are at this time. But it is a matter of great importance to know in the particular case in hand what the relation of the head is to the pelvis through which it must pass. Tables have been compiled which give the approximate weight of the child at different periods from the thirty-second to the fortieth week, with the appropriate biparietal diameter of the fœtal head at the corresponding periods, as well as the diminished conjugate diameters to which the fœtus may be expected to adapt itself at these times. But for practical purposes such tables are useless. No one would ever be able to recall at the critical moment the information he desired, and if he could recall it the chances are that the knowledge would not be useful in solving the problem. We may determine the relative measurements of the pelvis as well as the relation which the fœtal head bears to the pelvic canal at its constricted portion, which is usually the conjugate of the superior strait, by a very simple procedure. This manœuvre may be resorted to during gestation, or when labor has begun at full term.

To secure this information, map out by external palpation through the abdominal walls, the body of the child as accurately as possible. In the hypogastric region we search for the neck of the child, which is determined by the depression between the dorsal surface of the trunk and the region of the occiput. Then the head of the child is mapped out by bimanual examination, and to prove the correctness of the diagnosis, the head is made to descend slightly upon the examining finger within. If an assistant of intelligence is at hand, the external manipulation may be conducted by him. The head of the child is then made to descend by simultaneous pressure upon the breech and occiput. The hand within the vagina then ascertains whether the head really descends, whether it passes the promontory, or whether rotation occurs. Where serious obstacles are present it is easy to prove that the head remains with the greatest diameter above the pelvic brim, and even bulges out the region above the symphysis. Such a determination of the relation of the head of the pelvis is of decided importance in settling the time for the induction of premature labor, in serious cases of pelvic deformity, especially when we are in doubt as to the period of pregnancy. Labor can be brought on when the head can be pressed into the pelvis no further than the vertex, and delivery will be accomplished

too soon if the head is pressed into the pelvis down to, or slightly below the parietal protuberances.

In case of an obstacle to labor at the superior strait, the gestation having advanced to full term, this method of determining the adaptability of the fœtal head to the pelvic inlet may be of great service and enable one to choose between two or more competitive procedures. No great force is necessary to secure adaptation, and it need not be continued more than a moment or two. The lower uterine segment offers no obstacle to the descent of the head. The only difficulty to be anticipated would occur in case of a woman with fat abdominal walls or with great hyperæsthesia of the uterus. Anæsthesia might be necessary. This method can never supersede internal measurements by palpation, but may be employed in conjunction with them, and it has the additional merit of affording a very accurate idea of the relation of the fœtal head to the pelvic inlet.

We will now proceed to define the limitations of the different procedures called for in pelvic narrowing, based upon comparative degrees of deformity expressed in inches at the conjugate of the superior strait.

It is obviously impossible to construct rigid absolute rules for the guidance of the surgeon in cases of this kind. Other factors besides that of pelvic contraction have to be taken into consideration, and herein the personal equation, *i.e.*, the skill and experience of the operator are of great value in deciding in favor of one procedure or another.

The variety of the deformity, as well as the degree of contraction in both transverse and conjugate diameters, the depth of the symphysis and angle of inclination, the size of the fœtal head, the condition of the child, and duration of labor are all factors of such great importance that neither one can be neglected in the estimate of the procedure which it is desirable to adopt to effect delivery. In a Society discussion, or in a formal essay, we can venture to split hairs, and declare that this or that operation is the suitable one in a certain variety of deformity, with contraction not exceeding a certain degree. But at the bedside all this is changed. It is results that we are anxious to obtain—to save both lives, if possible, which, considering the means at our command at the present day, we are not to be excused if we fail in securing.

The only hope we have of ever being able to accomplish such results is to study our cases in advance. Since it is practically impossible for two men to agree regarding the exact length of the true conjugate, how are we to be guided by a difference of $\frac{1}{4}$ of an inch, as to whether we shall elect forceps, version, craniotomy, symphyseotomy, or the Cæsarean section. These are the most difficult problems that can ever be placed before any man, and only the highest judgment, based on the most thorough examination, under the most favorable conditions, can hope for a satisfactory answer to these questions.

4. *Can we define, with any degree of certainty, the limitations of the different operative procedures by an approximate estimate of the extent of the narrowing?*

Under this head we have, as elective operations, forceps, version, symphyseotomy, craniotomy, and celiotomy or Cæsarean section. The answer to the above questions may be stated in five propositions.

1. *Those cases in which the deformity is limited to a shortening of the conjugate at the brim, and does not exceed* $3\frac{1}{2}$ *inches.* In *simple flat pelvis* contraction of the conjugate to this extent may terminate in normal labor, or forceps or version may be the operations of election. When all the diameters are reduced to the length of the conjugate, as in the *justo-minor pelvis,* four inches at the latter point may give rise to considerable delay in delivery and require forceps, though a natural birth of a living child at term is probable. A conjugate of four inches in the *generally contracted flat pelvis* may also cause difficulty in the birth and require forceps or version.

2. Those cases in which the diminution of the conjugate is reduced from $3\frac{3}{4}$ inches to $3\frac{1}{4}$ inches, though a normal labor is not impossible with a conjugate of $3\frac{3}{4}$ inches. In the *simple flat pelvis* version is likely to be required. Playfair says forceps are applicable in all degrees of contraction down to $3\frac{1}{4}$ inches conjugate of brim, though version is preferable when contraction is chiefly in the anterior-posterior diameter, with abundance of room at the sides of the pelvis for the occiput to occupy after the version. Many obstetricians believe that it is possible to deliver a living child by turning in a pelvis contracted to the extent of $2\frac{3}{4}$ inches in the conjugate diameter. Playfair inclines to this belief. Barnes maintains that, although an unusually compressible head may be drawn through a

pelvis contracted to 3 inches, the chance of the child being born alive under such circumstances must necessarily be small, and that from $3\frac{1}{4}$ inches to the normal size must be taken as the proper limits of the operation of version.

A justo minor pelvis with a conjugate of $3\frac{3}{4}$ inches may be terminated by forceps. Version is absolutely contraindicated in pronounced cases of this variety ($3\frac{1}{2}$ inches to 3 inches). If such a case is seen in time, the induction of premature labor, after viability, is preferable to forceps or version at full term. Should labor have begun, the case may be allowed to progress until nature has shown her inability to cope with the emergency. Then forceps, or, later, symphyseotomy, or, if the child be dead, craniotomy, may be necessary.

3. In all cases, without regard to the kind of deformity, if the birth canal is not obstructed by tumors, cicatrices or other insurmountable obstacles to delivery, when the conjugate of the inlet is reduced from $3\frac{1}{2}$ inches (8 c.m.) to $2\frac{5}{8}$ inches ($6\frac{6}{10}$ cm.), symphyseotomy seems, according to the latest reports, to be the operation which offers the best chances to mother and child. The object of separating the pubic symphysis (pubiotomy or symphyseotomy) is to increase, by the artificial separation of this joint, the dimensions of the birth canal. Quoting from a recent article by Dr. H. J. Garrigues, he says,* "If the symphysis pubis is cut in a woman lying on her back, with outstretched legs, the ends of the bones separate very little—only about half an inch; but if the joints of the hips and knees are bent, the distance is $1\frac{1}{4}$ to $1\frac{1}{2}$ inches, and by pulling on the iliac bones this is easily increased to $2\frac{1}{4}$ inches, without injury to the sacro-iliac articulations; but if the separation is carried as far as $3\frac{1}{2}$ to 4 inches, one or both of these joints are torn open.

"In consequence of the separation of the pubic bones, a considerable change takes place in all directions of the pelvis, whereby it is rendered much more spacious in all directions or planes supposed to be laid at right angles through the axis."

As a result of the advantage gained by the increase in the dimensions of the pelvis by the performance of symphyseotomy, the prospect is that craniotomy on the living child will be banished from obstetrical practice. It certainly will be so in hospital practice, and it should and will be so in private practice if obstetricians make

* *Medical Record*, May 20, 1893, p. 611.

themselves familiar with the *rationale* of the procedure and recognize the advantages to be derived from its adoption.

4. In a contraction of the pelvis less than $2\frac{3}{4}$ inches ($2\frac{5}{8}$ inches, or $6\frac{6}{10}$ c.m.) and not exceeding $2\frac{1}{2}$ inches ($6\frac{4}{10}$ c.m.), the operation for the induction of premature labor soon after the thirtieth week is the operation which may be considered, and, like the operation for the induction of abortion in the highest degree of pelvic contraction, is to be compared and comes into competition with the modern operation of Cæsarean section. Until recently, contractions less than $2\frac{3}{4}$ inches in the justo-minor pelvis and of less than $2\frac{1}{2}$ inches in the simple flat pelvis, placed these cases under the ban of that sacrificial procedure—abortion. At the present time the new Cæsarean section, by means of a more perfect technique, asepsis, and the more perfect diagnosis of the conditions demanding operation, offers to the patient a procedure which is greatly to be preferred, in view of its life-saving features to both mother and child. Abortion may be avoided and premature labor is unnecessary. Cæsarean section seems absolutely indicated in any pelvis whose diameters are below $2\frac{5}{8}$ inches conjugate vera, with a living child; also in cancer of the cervix, in oblique deformities of the pelvis, and when tumors obstruct the vagina, so as to render the birth of a living child impossible.

5. Craniotomy, since the revival of the operation of symphyseotomy, has a very much more limited field of applicabilty than formerly, if recent impressions prove to be reliable.

Upon the dead fœtus it is certainly justifiable in moderate degrees of pelvic contraction, in malpresentations and positions, deformities of the fœtus, and in cases when the conjugate vera is under $2\frac{3}{4}$ inches.

Whether craniotomy upon the living fœtus is ever justifiable is a question which men of large experience are not agreed upon. There will probably always be cases in which it is the only practicable resource left open to the operator. As, for instance, in a case of impacted occipito-posterior presentation, or a mento-posterior face presentation when the mother's condition, as indicated by the temperature, pulse, loss of strength from the fruitless and prolonged efforts at delivery, associated with dangerous thinning of the lower uterine segment, is such as to make any operative procedure dangerous except that which enables us to deliver by the speediest and safest means possible—viz., craniotomy.

THE RATIONAL TREATMENT OF CERTAIN PUERPERAL DISORDERS.

By George B. Peck, M.D., Providence, R. I.

It is related of an ambitious but pretentious lawyer that during his first argument before the Supreme Bench of the United States, it became necessary for the Chief Justice to interrupt him with the suggestion that "This court may be presumed to know *something* about law!" The admonition of the eminent jurist is not unheeded. I assume that he who takes the time and the trouble to read or to listen to these words is tolerably familiar with the present teachings of the science of bacteriology, the present state of development of the germ-theory.

Bacilli have been devoted attendants upon the human race, lo, these unnumbered ages. We made their acquaintance but yesterday. Not too late, however, for they will continue to abide with us a few centuries longer. It is for us simply to determine upon a proper style of deportment toward our newly-discovered companions.

The practical relations of human beings to such tiny yet murderous associates are susceptible of a threefold division natural at once and logical. The underlying conditions are: 1. The obnoxious microbes outside the unbroken covering, cuticular or mucous, of a vigorous healthy body. 2. Their actual storming of more or less accessible breaches in the vital armor, occasioned by violence or by physiological processes. 3. Their establishment of camps within the human frame. Evidently, the functions of a physician toward these conditions are as diverse as the situations indicated, although in any given instance he may be compelled to discharge them all. Concerning the bearing of a surgeon toward disease-germs, I will not presume to speak, although elsewhere I have intimated, by reference to unimpeachable authority, his subjection to the same principles which should govern his brother.

If a physician is consulted concerning pertinent matters when

thoroughly satisfied none of these little creatures have discovered an entrance to his patron's body, he must act simply as a hygeist. To the performance of that duty, however, he should bring all attainable knowledge of the resources of sanitary science. This service has, singularly enough, been dubbed by some "preventive medicine," an incongruous and absurd appellation.

Should a doctor succeed in catching any of the well-nigh omnipresent wanderers in an attempt to scale any breach opening to the citadel of life, he would at once thoroughly, though *gently*, sweep thence the invading hosts, for, as was shown in detail one year ago, experience and bacteriology alike forbid the application of corrosive or irritating substances to raw surfaces.

If aid has not been summoned until invasion has been measurably accomplished, the attendant's duty is still unmistakable. Since the chief physiological disturbances and anatomical changes (pathological conditions) subsequent to the lodgment of these impalpable foes within the human frame are the direct result not of themselves nor yet of their work, but of the efforts of the organism to free itself from their presence, it follows as naturally and as inevitably as does the day the night that the *proper* course of action is the administration of medicaments which shall intensify and sustain (reinforce) the exertions of the affected organism in its endeavors to expel the intruders; in other words, the dispensation of remedies capable of producing corresponding phenomena when given to the healthy and sound. The possession of such property by any substance can be definitely known, of course, only through antecedent experiment.

Parenthetically, it may be remarked (*a*) that it is perfectly proper to speak of a person's being threatened with any one of many of the so-called diseases. Should an invading host be routed before it had deployed its columns, before it had clearly manifested its character, any assumption consistent with the apparent phenomena would be legitimate. (*b*) The inherent possibility of overwhelming the enemy at any time is also evident, although the synchronous destruction of his works is neither claimed nor expected. A reported cure at any stage of any case of an infectious disease requires, therefore, no stronger proof than other commonplace statements of alleged facts.

To resume: Since the laws of nature are general, not to say universal, originating not in human formulation, but in the established

constitution of things, and since the known field of infectious diseases is broadening with marvellous rapidity, while extreme uncertainty attends the limitation of its boundaries, it is clear that with him lies the burden of proof who dares affirm that the administration to the sick of remedies capable of producing corresponding phenomena when given to the healthy, is not the proper course of action in all curable cases.

Finally, since the character of the work of many microbes varies with the age, sex and condition of their victim, and since autopsies frequently reveal their unsuspected presence at important points, there is no reason to expect a parasitic pathology will prove a more reliable guide in the healing art than have been the humoral, the methodic and the pneumatic. Hence naught remains for the true physician but to exemplify the singularly significant motto of this World's Congress, and day by day to treat

"Not Things, but Men."

Discussion.

L. C. Grosvenor, M.D.: *Mr. President, Ladies and Gentlemen.* —If there is an evil principle in this world, it is always ready to jump on us when we are down. If we see a boy going to the bad, we say that is all I expected of him. I knew him when he was a little fellow. There is another principle always ready to boost us when we are going up. Now, these two principles are just as active in our physical life as in our educational life, in our moral life, or anywhere else, when we are in high health or when we are in diseased condition. These microbes are of all denominations. They are ready to jump on us and abuse us. When we are, in a general way, in fine health, they pass by on the other side of the street and take off their hats to us. This is one of the inducements, not only to us as doctors, but to our patients, to always live on a high physical plane.

Alonzo Boothby, M.D.: I could not say anything on the other matter when you spoke to me, but when I get a chance on this subject, I always take advantage of it. I believe that remedies have a great deal of influence on septic disease, but I would not say that we have to depend upon them in all cases; and while the paper has hardly committed the writer to that position, yet that is what it leads to, or what *has* it led to? If we have a perfect condition of things, we do not need any antiseptic, but we do need the aseptic principle put into practice in every case; and I presume that hardly anybody here would think of attending a case of confinement, any

more than they would attempt making a surgical operation, without having everything clean about them. If you have everything clean and a healthy subject to deal with, I say you need nothing more than that. But suppose you have a diseased vagina; then are you not going to use your antiseptics, and is it not true that a cut surface anywhere will bear these applications with perfect immunity? I think that those who use them speak most positively in regard to them, and it is not to the advantage of any member of this Congress to suppose that they will do harm, because the one who has used them says that they did not do any good in the proper way. Some one spoke of using one to ten thousand of the bichloride solution. Now, you might just as well use hot water. That is what you get when you use such an antiseptic. If you use an antiseptic, you must use enough of it and use it long enough to produce some action on microbes. They would bear that solution for two or three minutes, and be just as lively as ever. Beside, we have not to adopt the germ-theory. It is possible that it is the poison accompanying the germ; but whether it is the one or the other, the effect is the same.

Dr. Foster: *Mr. Chairman, Ladies and Gentlemen.*—I have nothing to add to what has been said already. I might give you my own opinion about antisepsis in midwifery and asepsis, and I don't know that it would carry any particular weight with this body. I think that if we have the evidence of septic infection present, we ought to use antiseptic measures to antidote the evil and if we haven't any evidence whatever that there is any such thing wrong with the patient, then we ought not to have anything to do with antisepsis or asepsis, for our patient is aseptic already. One gentlemen said, what I don't understand, that a solution of corrosive sublimate one to five thousand would be no more efficacious than hot water.

Dr. Boothby: I beg to correct that. It was one to ten thousand that would have no beneficial effect.

Dr. Foster: Well, one to ten thousand has sometimes produced serious symptoms. One to five thousand has caused death, and that in more cases than one, so I don't think corrosive sublimate is always safe even when made in as high a solution as one to ten thousand.

R. Ludlam, M D.: I think it is important to be specific in what we are talking about. Two or three have the same opinion, but they haven't specified. My good friend, Dr. Boothby, thinks that such a weak solution as one to ten thousand of the bichloride would be of no great service in the vagina. My good friend, Dr. Foster, speaks inferentially, of the bichloride upon the perinæum. The bichloride in contact with the perinæum is very poisonous in a very weak solution, but it is not so in the vagina, unless it chances to get

through into the perinæum. So I submit that these two very clever fellows are talking about two things.

C. H. Cogswell, M.D.: I don't know that I dare tackle this subject. I had occasion to prepare a paper for the American Institute last year, but it is very seldom that I do. I stated in my paper then—I can only reiterate the statement to-day—that I have no use for antiseptics in obstetrical practice. I have never seen a time when they were needed. I know of a great many cases that have been injured by the use of them. I reported twenty cases last year from the use of the bichloride (one to three thousand) in labor. I try to be clean and keep my patients clean and when I have done that I believe I have done all that the good Lord asks me to do.

H. W. Robey, M.D.: One point, I think, would profit all of us to ponder. It seems to me that the Homœopathic profession is gradually and surely taking ground against the germ-theory of the origin of disease, and we, I believe the majority of us, are coming more and more clearly to the conclusion that it is merely one of the passing fancies of the age—that diseases are not, as a rule, produced by these germs, but they are simply the accompaniments of disease; they act as scavengers of the system to throw out the morbid product of disease and that they are blessings in disguise and not our great enemies. We find connected with all the products of decomposition, both in the animal and vegetable kingdom, certain kinds of scavengers which nature seems to have provided in her great law of conservation.

Dr. Sheldon Leavitt: I have been slow to put myself on record with regard to this matter of antisepsis. I have been undecided in my own mind just what course it is best to pursue. I spent some six weeks with Tate in Birmingham, England, and I saw there the utter disregard for these things which he manifested, and at the same time the excellent results which he obtained in a surgical way. In regard to practice of an obstetrician I may say that this is an important matter. I make no allusion now to the puerperal state wherein we may have indications of pathological conditions, but I allude to parturition. I always wash my hands thoroughly before an operation, and I usually employ no antiseptics. If the nurse asked me if I wished to use an antiseptic solution, I would say: "Yes, with thanks." If nothing is said, I do not use it. I am particular to wash my hands very clean. I carry in my case the bichloride and Carbolic acid, but in three cases out of four I make no use of them. I have in my private practice for a number of years seen no evidence of septic infection.

My practice in the hospitals is different. The conditions and circumstances and surroundings are different, and I feel called upon to exercise still greater precaution. Now, I believe that we ought to exercise unusual care in the hospital, but what I have been alluding

to, in my remarks just made, is to practice of a private nature, and you have my modus operandi in these cases.

DR. HARVARD: I would like to ask one question of Dr. Leavitt. If we, as physicians, are not responsible for our example, and if we have positive opinions upon subjects we should say "yes" when we mean it, and if we think it is not necessary say "no, with thanks."

DR. LEAVITT: As I said, my opinions on this subject are not very positive, but I am giving my practice.

J. W. HINGSTON, M.D., North Platte, Neb.: All who have yet spoken have been from the cities, and their practice is mostly among the better classes. They have a privilege, to a certain extent, of choosing their patients. Now, it has been my experience to be called into places from which I would gladly have staid out—where there was neither fame nor name. When we look around for a nurse, we find one of the same class. When we wish to give instructions as to the work, we find that, no matter how particular we are, our words are entirely neglected. If we ask for a syringe, it is black with filth; if we ask for a basin to wash our hands in, it is one used in the kitchen. So that it is often a question in my mind whether we should do anything at all in the way of antisepsis.

PHŒBE J. B. WAITE, M.D.: We must remember that there are many things to be learned from experience, and from the experience of those who have gone before. The fact remains that notwithstanding all the antisepsis that we are talking about to-day, our grandmothers and our mothers had families of six to ten and even up into the teens, and they lived and the children lived, and the doctors who attended them had never seen a fountain syringe, had never heard of the bichloride, and the disgusting smell of Carbolic acid was unknown in the world. I suppose there is not a gentleman in this room who does not believe that cleanliness is next to godliness. When I began the practice of medicine I understood that. I have had no case of septic poisoning and have used no Carbolic acid or bichloride. Among the "well-to-do" I can have things more comfortable, but I dare not say I have had any better success than among the lower classes.

F. B. RIGHTER, M.D.: I am very desirous of hearing the end of Dr. Hingston's story, and I have just asked him if he was troubled in his cases with peritonitis and other septic diseases, and he says no. Now this is enough to shatter the rankest bacteriologist. I was in hopes, when I came here, that I would gain some knowledge as to whether this World's Congress believes in the germ-theory as the cause of disease. The discussion of the subject by the essayist wandered over a large territory. I may be doing him an injustice, but he seemed to me to treat this subject with something like levity. I didn't catch the drift of his paper; however, what I did get of it

reminded me of that great American humorist who, when he announced his subject, never referred to it again during the whole lecture.

In regard to asepsis, I, with Dr. Hingston, have seen many cases which occurred where the conditions were as bad as they could be, and no bad results occurred. Now that may be due to our atmosphere and our climate. I never in my practice of obstetrics use the vaginal douche unless there is some special call for it.

F. J. Becker, M.D.: I must apologize for speaking here, but I cannot refrain from saying something in the face of these remarks, which seem to leave the impression that we, as physicians, are allowing ourselves to stand in the face of the facts which are taught us by bacteriologists. If these men who have spoken to-day knew what has been accomplished in German hospitals in the way of antisepsis, they would be friends of antisepsis. I am a friend of asepsis, but there are cases in which antisepsis must be practiced in order to obtain asepsis. Take the germ of cholera and put it in gelatine, and the germ can be produced and reproduced. The fact that many persons escape septic disease is no argument whatever against antisepsis.

Martha G. Ripley, M.D.: I should say that the practitioner who comes from a case of erysipelas has no business in the obstetrical room.

The younger men and women may learn something from the practical experience of those who talk to them. There is something to be said for the country practitioner in the way of good air, which in crowded cities we don't get. If I could choose my patients, I would have their surroundings pleasant and the best of nursing, the best of care. But in general practice we must do the best we can. I think we forget that an obstetrical case is not necessarily a pathological case; that it is physiological. I live in a city where I presume that two-thirds of the women are attended by midwives. We have a large Scandinavian element, and they rarely call in a physician. They take no antiseptic precautions, and often the doctor's business is to stand by and watch, and merely help when it is needed.

Now, in the maternity hospital of which I have charge there are hundreds of women, and almost up into the thousands, who have been confined within a few years. We have not had a single case of sepsis. I treat these cases according to common-sense—my idea of common-sense. My hands are cleaned, the nurse's hands are cleaned—not necessarily with bichloride, although we have it. No antiseptic treatment is used at all unless there is a bad uterus. Then we cleanse it. Fifty years ago it was better for a woman to be confined in a gutter than in a hospital. In our days things have changed. It is better for a woman to be confined in a hospital than

at her own home. Why is that? Because we have found out the close relationship between the puerperal state and septic disease.

Dr. Becker: I am inclined to look at the case somewhat in the manner of Dr. Ripley. Lying-in is a purely physiological case. We have heard a great deal about the bright side of obstetrical cases. I have had, within the last two years, two cases where there was trouble. I found it was not due, however, to the lack of antisepsis, but in both cases could be traced to taking cold. Now we recognize the matter of a woman's keeping warm during the menstrual period. We know, as physicians, the serious results arising from the suppression of this function, and I believe if we were as careful to keep our patients warm as a great many are, I do not believe we would have one-half of the bad results we now have in practice.

Dr. Kinyon: I want to enter a protest against one point. My friend Dr. Robey makes a statement that the majority of the Homœopathic fraternity do not believe in the germ-theory of disease. If this is true, I feel sorry for the Homœopathic profession. I simply wanted to make this point, when somebody objected, and said we ought not to go from a case of erysipelas to a case of confinement. Why does he object?

George B. Peck, M.D.: I flattered myself that the members of this Institute read my paper carefully at their homes, and if they did, they found that I confined myself strictly to my subject, and furthermore, have said all there is to be said on that subject. I am well satisfied of the truth of the germ-theory of disease. I wish it was absolutely demonstrated, for in the practical working of the germ-theory I find the strongest proof and the best explanation of the cure of disease I have found anywhere. The profession as a whole believes thoroughly in aseptic precautions. That is to say, at least three-quarters, as was indicated by the statistics which I presented last year, when this subject of the germ-theory came up. I object to the use of corrosive sublimate on chemical grounds. The instant that substance comes in the presence of liquid albumen, it forms an insoluble precipitate. That being the case, I have no use for corrosive sublimate in a vaginal douche. It has been stated that the testimony of city doctors who enjoy select practices has been given here. I am a city doctor and I defy any one, unless it be some one who has practiced in the neighborhood of Five Points in New York, to have a meaner class of patients than I myself have in regard to one class of them. For some years I have been city physician simply because if I resigned, an Allopath would be appointed in my place, there being no Homœopath in the district qualified, and second, that it feeds the hospitals. I have been in places that no one cares to go, and I never lost a case or had any serious trouble or any germ-disease among those people. But that

does not shatter at all my belief in the germ-theory. Because the people I find there are a class who enjoy perfect health, and I have no cares for their safety.

The matter of putting pure bacteria into the perinæum is another proof of the truth of bacteriology. It will produce natural results. Its excreta, whatever they may be, depend upon the individual, and upon the species. It doesn't make any difference whether the poison is due to the presence of bacteria or the results of their presence. If we use disinfectants, they should be mild and unirritating, and of those there are plenty.

THE YEAR'S PROGRESS IN OBSTETRICS.

By Sheldon Leavitt, M.D., Chicago, Ill.

For several years progress in the art of obstetrics has been mainly along surgical lines, until so much operative work now pertains to the complete practice of this branch, that he who expects to rely upon himself in the hour of emergency must possess surgical skill. Moreover, requirements for the successful practice of obstetrics are daily becoming more exacting. Midwives and incompetents will ultimately be driven out of the field by the lash of public sentiment.

Symphyseotomy.—The old operation of Sigault, known as symphyseotomy, which had quite a run in the latter part of the last century, has been revived in this our day by the Obstetric School of Naples, and thus far has a good record. In this country it has been employed but a few times, but the sentiment of accoucheurs appears to be friendly toward it.

It is only occasionally appropriate, and probably far less frequently in this country, and especially in the west, than in the more densely settled countries of Europe, where pauperism is more prevalent, and the people are harder worked and more poorly fed.

Ever since the original operation of Sigault fell into desuetude, obstetricians have busied themselves in efforts to devise methods for reducing the size of the fœtal head to correspond to pelvic dimensions, and as a result, thousands of fœtal lives have been sacrificed for want of the very expedient which had been cast aside.

It is unnecessary for me to say that the secret of our success with Sigault's operation to-day is found in cleaner methods and finer technique.

For some years Cæsarean section has been the standard operation for cases in which the antero-posterior diameter of the brim was reduced as low as $2\frac{3}{4}$ inches; but recently a living child has been delivered by means of symphyseotomy when the diameter was only

$2\frac{2}{3}$ inches. The wonderful improvement in obstetrical results which this affords is at once apparent when we consider the vast difference in point of mortality between the two operations, Cæsarean section and symphyseotomy. Nor is maternal life preserved at the expense of subsequent misery, for according to the reports thus far made, there are no disabling effects produced in the woman as the result of temporary disarticulation of the pubic bones.

Still we are to recollect that the operation is yet on trial, and should lay corresponding restraint on our enthusiasm. The true value of it can better be told in a twelve-month.

After the os uteri has become fully dilated, and futile attempts have been made to deliver with the forceps, or as soon as we find that the fœtal head is unquestionably so decidedly out of proportion to the size of the pelvis that delivery of a living child cannot be effected, the time has arrived for the performance of symphyseotomy.

The field of the operation is prepared in the usual manner (which preparation should include shaving the mons veneris and vulva), and an incision is made about two inches long in the median line, the lower limit of it being a point just above the clitoris. A few fibres of the rectus muscle are separated from the pubes on either side of the median line, and the finger is passed down along the posterior surface of the symphysis. Using the finger as both director and protector, a curved probe-pointed bistoury is then made to sever the articular soft structures, including the sub-pubic ligament, great care being exercised to avoid wounding the other structures. The articular surfaces are gently separated a few lines, the wound is examined for bleeding points, these being secured with fine catgut, temporary gauze packing is used and the forceps are applied. Delivery should be practiced with great care, and during traction effort the trochanters should be supported by the hands of an assistant. After delivery of the placenta the gauze is removed, the control of all bleeding assured, the articular surfaces are brought together and held by silkworm-gut sutures through the fibrous structures along the face of the bones, which fall within easy reach, and then the external wound is closed. In exceptional cases it may be wise to practice drainage for twenty-four hours. A tight bandage should be applied to the hips and firmly secured. The recumbent posture should be enforced for about four weeks.

The Cæsarean Operation.—I am not aware that there has been any improvement worthy of mention in the technique of the Cæsarean operation or its modification during the past year; but the sentiment is becoming nearly universal that the operation should be regarded as elective in the matter of time.

Formerly, the custom was to resort to surgical interference only after labor had been well established, and that, too, even in cases wherein delivery *per vias naturales* had been recognized as impossible.

Without pausing here to note the objections which have been made to early interposition, I may be allowed to emphasize the advantages arising from ante-partum operation, viz.:

1. A better opportunity for deliberate and painstaking preparation on the part of the operator is afforded.
2. Daylight can be assured.
3. The patient can be more thoroughly prepared.
4. The vital powers of the woman have not become seriously impaired.

In view of the bearing of exact pelvic and cranial measurements on the selection of the most suitable operation for an individual case, I should not omit to direct your attention to the demand for more frequent use of the pelvimeter and a careful estimate of cranial dimensions, which the introduction of symphyseotomy has established.

Sänger vs. *Porro.*—Cæsarean section, pure and simple, as practiced by Sänger, and Cæsarean section as modified by Porro, are still rivals for surgical favor. In Italy, where it originated, the Porro operation is by far the most popular, while in Germany Sänger's operation is in greater favor. The surgeons of this country have exhibited a preference for the latter method, though some of the best operators are outspoken in their preference for the former. Dr. Robert P. Harris, whose statistics are most elaborate and reliable, believes that Americans have good reason for preferring the improved Cæsarean operation, inasmuch as twelve out of twenty-eight Porro subjects, up to the present time, have died, against five out of the last twenty-eight delivered under the other method. On the other hand, "our success," says Dr. Joseph Price, who has thus far produced the best statistics of personal abdominal work which the world affords, "in supra-vaginal extra-peritoneal hysterectomy for

fibroids, and the low mortality accompanying the operation has assured our faith in the Porro operation." "Hysterectomy should be performed," he continues, "wherever the Cæsarean section is necessary." Thus the controversy goes on, but out of the din and smoke of the tumult we gather indications of the advantage of the Porro over the Sänger operation for the use of the average surgeon and gynæcologist outside of hospital walls. It is more easily and expeditiously performed, and, what to my mind commends it still more, the possibility of future impregnation is prevented. The sentimentality in which some indulge, and the amiability which would encourage reproduction by such women of weak, deformed, and usually dependent children, should be discountenanced. The record which Rosenburg found of thirty-six cases wherein Cæsarean section had been performed from two to five times on the same woman, is to my mind deeply revolting.

As in the case of supra-vaginal hysterectomy under other circumstances, some late operators have treated the stump according to various intra-abdominal or intra-pelvic, if not strictly intra-peritoneal, methods, but the ordinary operator will still prefer to fasten the stump at the abdominal opening.

Cæsarean Operations vs. *Craniotomy.*—The accoucheur who possesses surgical skill will hereafter reserve his perforator, his craniotomy forceps, and his cephalotribe for use only upon the dead fœtus, for, with the child still living, abdominal section and symphyseotomy are the operations to be considered. Upon a dead fœtus, in a pelvis measuring in excess of 3 or at the least $2\frac{1}{2}$ inches, such instruments will afford occasional aid, but not elsewhere. This is the dictum of late obstetrical authorities, and yet I can conceive of an occasional case in the experience of those who have no surgical skill themselves and cannot readily summon those who do possess it, wherein an exception to this rule may properly lie. The practitioner who is inexperienced in surgery of the abdomen, but who is accustomed to obstetrical manipulation, will be less likely to do serious harm with the perforator and allied instruments than with the knife; and to such cases, with an environment decidedly unfavorable so far as concerns consultative facilities, rigid rules cannot be applied.

Ischio-Pubiotomy.—I should not fail to refer to a congener of symphyseotomy known as Farabeuf's operation, which consists of section

of the pelvis at a point about 2 inches to the right or left of the symphysis pubis, according to the direction of the pelvic contraction. It is intended for cases of obliquely-contracted pelvis, wherein symphyseotomy would be comparatively ineffectual. The most recent example of this operation, of which I have seen a report, is from the clinic of Prof. Pinard, of Paris.

In order to make the result of this operation satisfactory, as it appears to me, the greatest care will be requisite, owing to the presence, at the site of section as designated, of the obturator nerve which supplies adductor muscles of the thigh. In measurements recently made on the cadaver, I find that the point of exit of this nerve, at the upper and inner margin of the obturator foramen, is just 2 inches from the symphysis. The obturator vessels are also found at the same point. To go to the outer side of this opening would materially diminish the danger of section, but the operator must recollect that the nerve there lies close to the lower border of the horizontal ramus of the pubis. If section is made at a nearer point the body of the pubis alone will be cut, and, owing to proximity of this line of incision to the symphysis, the special advantage of the operation over symphyseotomy will be measurably diminished. The best point for section is probably about $2\frac{1}{2}$ inches from the symphysis. The direction of the section will be downwards and somewhat inwards, the chain saw cutting first the transverse and then the descending pubic rami. Of course, the obturator nerve can be avoided by careful adjustment of the saw about the transverse ramus.

Pyrexia in the Puerperium.—Advanced notions concerning the treatment of puerperal pyrexia have been maintained and strengthened. I have frequently seen the temperature in the puerperium run up to 103° and 104° for a few hours and then subside under the influence of simple remedies, and therefore great haste in the matter of operative interference is by me discountenanced. But when the temperature is disposed to remain high, or when there is a decided rigor at the beginning of the pyrexia, with no explanation traceable to disturbance distant from the pelvis, little time should be allotted to the expectant plan of treatment. First of all, let the vagina be washed out with a gentle stream of hot boiled water. If the symptoms do not improve within a few hours, or if the temperature is only temporarily lessened, the uterus should be carefully washed out

with plain boiled water, ample provision being made for the return of the fluid. Then seizing the cervix with a pair of bullet forceps and drawing it downwards until it is within easy reach, the uterine cavity should be wiped out repeatedly with pledgets of absorbent cotton or iodoform gauze. If this should fail to give more than temporary relief, the organ should be curetted and packed with either iodoform or sterilized gauze, the end of the strip being allowed to trail into the vagina for drainage purposes. If up to this point the manipulation has been done with due regard to asepsis, the packing may safely be left twenty-four hours, and subsequently renewed if required. It may be unnecessary to say that all this manipulation would better be left undone unless it be done with strict regard to perfect cleanliness. A thoroughly clean vulva and vagina and uterus are absolutely essential, and the fingers of the operator, the instruments, and the packing material must be above suspicion.

If at the end of twenty-four hours after packing the temperature does not approach normal, and the other symptoms do not evince corresponding improvement, we are left to infer that the cause of the disturbance, while originally within the tract which has been thus treated, has now located itself within the lymphatics, the veins, the tubes, or has invaded the peritoneal cavity. When this is true some practice laparotomy without delay, but, in view of the results of such operations, as shown by reliable statistics, I would still withhold my hand for a season, meanwhile hoping to obtain from our deep-acting remedies results unlooked for by Old-School practitioners. This relegates laparotomy, in such cases, to the place of a *dernier ressort.*

Episiotomy.—I am convinced, from what I have seen and heard, that the operation of episiotomy is far more commonly used than formerly. About three or four years ago I appealed to several of our prominent obstetrical practitioners for their experience with the operation, and was surprised to find how few had become familiar with it in a clinical way. At that time I had resorted to it a few times, but of late I have had rather frequent recourse to it.

Whereas it was my former custom to make several small incisions on either side of the vulva, I now make but one on each side, and that of sufficient depth to give the needed circumference. The authors who mention the subject at all usually advise that the incisions be made with a knife, and that we leave the integument in-

tact or nearly so; but this is not my practice. When the perinæum is bulging, and the vulvar circle is tense, with every certainty of laceration, I slip the scissors under the thin margin and cut outwards and backwards from a half to three-quarters of an inch. By this means the vulvar circumference is greatly augmented and the perinæum is saved. After delivery of the secundines I put two or three catgut sutures into each wound, and the result is usually a perfect vulva. I confess to a partiality for this operation, and have yet to meet the case wherein I have had occasion to regret my resort to it.

Immediate Repair of Parturient Lacerations.—The demand for immediate attention to lacerations involving the vulva and vagina is becoming more imperative, while some teach and practice immediate suturing of even cervical rents. Surely the time is ripe for declaring that the accoucheur who fails to suture vulvar rents is guilty of gross neglect. Nor should one be allowed to escape censure under the plea that anything short of an extensive laceration is not reckoned by him as a laceration.

Suture of such wounds must be thorough, since otherwise the operation will prove unsatisfactory.

Asepsis.—Essential progress is being made by the great body of obstetric practitioners in the direction of thorough cleanliness in midwifery practice, but there is still much room for reform in this direction. The slackness of many accoucheurs is truly appalling. Filthy instruments and filthy fingers appear to be the rule rather than the exception. Both students and practitioners need education along this line.

Discussion.

L. C. Grosvenor, M.D.: I don't know, Mr. President, that I have anything to say to this able paper. I have enjoyed it intensely. It is as full of meat as a nut, and I am very glad to see our Homœopathic obstetricians coming clear to the front on these very important subjects.

Martha G. Ripley, M.D.: I was very much pleased with the paper, and doubt if I shall be able to add anything to it. I wish to say that within a year or two I have had what I consider a very important method of using the forceps. I have never seen it mentioned in any work—in fact, it is directly in opposition to the rules that were given me for the use of forceps. In my obstetrical box I carry two sizes of forceps, the medium and the short, the very small.

I have those small forceps with me at every case, and in cases where I fear a laceration of the perinæum when the head bulges on the perinæum, when I come to that point I stretch it. If I fear that the outlet is not sufficiently large, and I judge it impossible for the head to pass, then I take my scissors and make the last operation spoken of, on each side. When there is any pain and the ligaments are stretched, I make a cut on each side from a quarter to a half an inch, as I think best, putting in fingers as they are needed. That is very much better than a laceration of the perinæum. I like that operation very much in case I fear there is to be a laceration. Now, to avoid a laceration, I have worked over the perinæum and stretched it and dilated it as much as possible; then when there is no pain, I put in my small forceps. If a pain comes, I stop. I work when there is no pain, when every part is relaxed. I can get then the best results. I have tried it in hundreds of cases, and I can avoid a laceration of the perinæum many times; and if I delivered with the forceps when there was pain, I would get laceration. I will say this: the patients are not frightened by the word forceps. I say to them, "I have a little pair of spoons here that will help. I will shorten the operation." I think mine are the Higbee forceps —the smallest size you can find.

It has been said that you can use large forceps as well. I want to say that sometimes I can get along better without any forceps; but when you depend upon delivering without the pain and expulsive efforts of nature, you have got to use a little force. Sometimes I get along without using any forceps. You cannot use force without pain.

Dr. Hingston: Almost the last words of one of the doctors was that he believed that it was almost a rule, rather than the exception, that obstetrical cases were attended without any care as to asepsis. Now, in my discussion of the paper before this one, I rather supposed that the people here thought that I was one of that class, and I don't believe I look like a very dirty man. I am heartily in concord with the opinion that the greatest aseptic condition should be adhered to; and when I remarked that I thought it was perhaps better to stay out of the vagina than to go into it under certain circumstances, I don't want to be understood that that was my method. On the contrary, if I had had time to finish, I would have said that after I go away from my cases, I insist that the nurse shall leave them alone—keep out of that domain. I permit none of these antiseptic washings that we have here recommended in the journals and elsewhere, to be carried out every day or twice a day. On the contrary, I believe that if we do not have trained nurses, we had better keep the nurse away from that domain. Let us make the vagina as aseptic as possible. Let us be as cleanly as possible. These are my views on this subject, and I was glad that this paper

came up after the other one, because I felt that I was misunderstood.

H. E. Beebe, M.D.: The measures recommended are all very good, but I think it is quite well proven that of later years laceration of the perinæum is more frequent when the shoulders are passed than when the head is passed.

Sheldon Leavitt, M.D., in closing the discussion, said: I have nothing of importance to add, though I might say a few words with regard to the use of the forceps as mentioned, more especially by Dr. Ripley. These short forceps—these very short forceps—are a convenience, to say the least. The use of emollients, as mentioned by Dr. Ripley, is an excellent practice; but we must give what Graves demanded—the tincture of time, in which the perinæum may accommodate itself to the size of the fœtal head. But the cases of which I spoke, in which episiotomy is desirable, are those in which we have given the time, and the vulvar opening is hard and unyielding, and the head out of proportion to it. Under these circumstances, where laceration is received, from the experience which we have had, we may introduce the scissors and make the incision to which I have alluded.

PUERPERAL FEVER.

By J. B. Gregg Custis, M.D., Washington, D. C.

Each journal that has been placed upon our desk during the last six months has told us of the World's Homœopathic Congress, and now we stand before this body of representative men, and are reminded that the eyes of the physicians of the world are upon us, and that they are asking why we Homœopathists are given this special auxiliary Congress. The answer must come from us, and if we fail to express here our distinctive opinions, and to show, with reason, what we do as a distinctive school, we can no longer lay claim to distinctive rights and privileges.

Our school has added so much that is original to human knowledge, that we can by right appropriate whatever is of value to science wherever found, and by virtue of our law, can cast off and discard whatever is worthless in the realm of therapeutics, the science in which we lead.

With this introduction, we wish to call attention to puerperal fever, a disease of especial interest to us as obstetricians, not only because of its reputed fatality, but also because of its various ætiology. The physician who masters the history, cause, progress and results of this disease, has a general knowledge sufficient for, and is equal to the discussion of any febrile disorder. This statement is not surprising, when as an accepted definition, we state that puerperal fever is any continued fever occurring in connection with childbirth.

The history, briefly given, is first traditional, Rachel's death being attributed to that cause. Hippocrates describes isolated cases. In fact there is no doubt that the disease has made its ravages during all ages, though it was not recognized as a positive epidemic fever until lying-in institutions were established. After their establishment, when records were more complete, we have it appearing in epidemic form, always with some years intervening, and travelling

over the world, thus: In 1750, in Lyons; in 1760, in London; in 1765, in Copenhagen; in 1767, in Dublin; in 1770, in Germany, etc.

During these epidemics it raged with such intensity that the death-rate rose in Vienna, as late as 1842, to almost 16 per cent. of the women confined. The points to be noticed here are, that the disease occurred in the form of an epidemic, as well as a sporadic disease. An old writer from whom we have learned much, divided diseases into sporadic and epidemic. According to that writer, sporadic diseases are those engendered by meteoric or telluric agencies, to the morbific influence of which only a few persons are susceptible at a time. Next to this class come the epidemic diseases, which attack many persons at the same time. They arise from the same cause, and individual cases resemble each other. These diseases usually become infectious when they pervade crowded districts.

The disease in question in its manifestations, falls under these definitions, the author referred to is our revered Hahnemann, and there is between the lines of these definitions all that our scientists of to-day have developed.

In 1847, Semmelweiss observed that in the wards in Vienna where the physicians attended, the more fever cases occurred, and that the mortality was greatest, while in those wards attended by midwives the mortality was comparatively small. In the first wards, medical students were allowed to examine the patients regardless of their previous occupation, whether in the dissecting room or in the surgical ward. As a result of these observations Semmelweiss advanced the doctrine that puerperal fever was the result of the introduction of a poison from an external source.

Simpson and others in 1850 claimed and proved to the satisfaction of many, that this fever was identical with surgical fever.

Note here that the physicians and medical students were important factors in the propagation and spread of the disease, and also that it did then, as it does now, come from the introduction into the system of decomposing animal matter. These statements in brief give the history of the disease under discussion.

Time will not allow us to do more than announce our conclusion as to the ætiology of puerperal fever.

1. We believe that there is sufficient evidence for believing that it does occur in the form of an epidemic. When in this form it is contagious and infectious, and that it should be placed among the

miasmatic contagious diseases. This is the disease of which Noeggarath isolated the germ. This germ may enter the body through the lungs, stomach or vaginal tract, it may be introduced prior to confinement and lay dormant, not developing till after delivery.

We are all justified in being guided by our experience, and in forming our conclusions in accordance therewith, and we must not ignore evidence from reliable sources. We believe that we have seen a specific form of puerperal fever.

We know that each year many of us have cases of cholera-morbus, cholerine, or severe diarrhœa, which present the symptoms of cholera. Some of these are fatal, and there is no way of distinguishing by symptoms between our cases and those of true cholera excepting that they are single, and that they do not appear in epidemic form. True, the microscope gives us a test, but how many of us use it, or can use it? We believe that cholera does occur in the form of an epidemic, individual cases presenting the same symptoms, and that under these circumstances it is infectious and contagious. Few of us have had personal experience with epidemic cholera. Because many have not had experience with puerperal fever in epidemic form, there is no reason to deny its existence in the face of the history we have.

This form of puerperal fever is contagious in the highest degree. No physician should take other cases of labor while in attendance upon a case of puerperal fever of this variety.

2. Physicians, students, midwives or nurses can infect our patients and so cause puerperal fever. When so infected it is by reason of the introduction of decaying animal matter, or the ptomaines produced during the progress of another diseased condition.

Pregnancy presents a physiological condition which tends to hypertrophy. The puerperal state is a physiological condition tending to atrophy.

After labor as the result of hæmorrhage, shock, more or less laceration and traumatism, the patient's vitality is at the lowest ebb. Consequently they are especially susceptible to disease, and the patient is in a peculiar state, which peculiarity, we can hardly describe. She is exposed to the above described dangers. It is rational also on evidence, to assume that germs which would under other circumstances be harmless, are now poisonous, so that the danger from infection by her attendants is greater than under any

other circumstances when the physician is called upon for assistance.

Any interference with the physiological condition of atrophy may cause an auto-infection. This is especially true when traumatism is introduced as a factor. When, under any circumstances, traumatic influences arrest circulation completely or is of such a character or extent to render its return impossible, we have fever, the danger of which depends upon the extent of the injury. Ordinarily the inflammatory condition remains at the seat of the injury, but when in connection with labor it interferes with the process of atrophy, we have as a result, a continued fever.

3. Evidence that we cannot dispute teaches that there is an intimate relation between many cases of puerperal fever and the zymotic diseases; diphtheria, erysipelas, and so forth. Personally we have been able to distinctly trace three cases directly to diphtheria. One case which occurred this winter, a patient who was nearing her confinement period, left her home because of the presence of a case of diphtheria. Ten days after she was delivered, and in thirty hours after delivery, puerperal fever was announced by the initial chill. Her attending physician had not seen the diphtheria case. Our inference is that the poison lay dormant in her system until after delivery.

We do not consider cases belonging to the last two cases contagious in the strict sense of the word, and the physician using especial care need not give up his obstetrical practice, because he is unfortunate enough to have one patient so affected.

The symptoms as observed by us, and of the disease as it has appeared among us are as follows:

The first is a chill of short duration, occurring from thirty to forty-eight hours after delivery, followed by a fever of great intensity. The chills return at irregular intervals, though the fever never leaves entirely. The temperature in true puerperal fever describes a curve of about forty-eight hours in length, the fever rising the first half and declining the second.

The patient may or may not present any spots of local tenderness, though there is generally some intolerance of touch over the whole abdomen; single spots of tenderness are more frequently found in the ovarian region.

The patient soon reaches a typhoid condition as regards tongue

and bowels, though puerperal fever is generally accompanied by profuse sweating, and there is but little delirium. These symptoms are constant regardless of temperature, which frequently reaches 104½ to 105, on the first and third days. There is usually diarrhœa after the fifth day, the stools being profuse, yellow and gushing, often uncontrollable.

The lochial discharge is not immediately affected, but gradually diminishes, and is not especially fœtid. The milk either does not make its appearance, or the breasts make but a feeble effort to establish their function.

The duration of the fever under the most favorable circumstances is seven days, reaching its greatest intensity on the fifth, but if the temperature reaches 98½ on the morning of the seventh day it will return during the following week; in fact we have seen it return on each seventh day for several weeks after convalescence was fully established.

We base our diagnosis on the peculiar curve marked on the temperature chart, the condition of the lochia, the non-appearance of the milk, and the absence of any localized inflammation. It is necessary to differentiate from malarial fever with its twenty-four hour curve and previous history, also from the fact that malarial fever diminishes the milk but does not destroy it; from fever and chill from suppression of lochial discharges, by the difference in the head symptoms, which disappear with the return of the discharge; from retro-mastitis by its later onset and the local symptoms; from septicæmia the result of retained fragments of placenta, by the knowledge on the part of the physician that the placenta was complete when expelled, and the fœtor of the lochia. Remember that this condition (septicæmia) is first one of local inflammation; true the system may become poisoned, but that is secondary. Puerperal fever is a constitutional fever, the poison being introduced directly into the system; the other is local and the patient's life is often saved by the formation of an abscess. We may also have pyæmia, the result of the absorption of the discharge of an old abscess. The history and later development of the symptoms will allow us to differentiate.

As to the prognosis, it is always grave, though in view of the possibilities of our own materia medica we need fear it no more than we would a case of scarlet fever in a non-puerperal patient. I say scarlet fever because I know of no condition so like it in range of

temperature and course even to the desquamation which sometimes follows puerperal fever.

History and ætiology are the same in all schools; preventive medicine should be. In the case of many diseases our school offers more than any other.

Recalling the part the physician plays as a cause, what course should he follow as to prophylaxis? One word covers all his duty, to our mind: Cleanliness. Cleanliness of the patient's person, cleanliness on the part of the physician and nurse, cleanliness of instruments. Everything that comes in contact with the patient must be in as perfect an aseptic condition as possible. No normal discharge from uterus or vagina before, during, or after labor contains any noxious bacteria. Our friends of the antiseptic school insist that we shall use the douche before labor, and in labor long continued use it during its progress, and are certain of the necessity for the use of the antiseptic douche after labor.

The definition of the term "Homœopathic Obstetrician," like that of all others, is to assist women during the lying-in period, the essence of the definition being in the word "assist." If he has followed the above instructions he can, during the lying-in period, assist without fear of causing injury or that he has introduced any poison.

Let me call attention here to the fact that there is as much danger in his placing too much reliance upon the supposed antiseptic properties of drugs commonly in use, as there is danger in the drugs themselves to the patient. The natural logical conclusion of the teaching of the antiseptic enthusiast is that the physician can attend more than one case of puerperal fever if he only uses sufficient antiseptic solution. That he may attend cases of erysipelas, even take part in post-mortem examinations, without danger to his obstetrical patients, provided he uses sufficient antiseptic solution. We see in this the greatest danger, and would caution teachers not to give too great liberty to their students by expatiating too strongly upon the wonderful power of this or that favorite solution.

There is no analogy in nature justifying the course as taught in most of our colleges. We, after much searching, fail to find any record of puerperal fever among animals excepting when operations have been performed; the terrible doctor again the cause.

And should poison have been introduced, what then? Its course through the system has been so rapid that its toxic effect is shown by the chill, the high temperature, etc., while local manifestation of the disease is still insignificant, so that we cannot hope by any locally applied remedies to modify its effects. After the germ has once penetrated the tissues, we soon have constitutional fever, in which the local organs are but slightly implicated. But, doctor, look at the records. True, since the introduction of the antiseptic treatment the disease has been reduced to a minimum, but the prohibition of examination by the students without preparation was stopped at the same time; so was the isolation of patients commenced; so was care on the part of the attendant physician as to habits first commenced. We claim that there is certainly no analogy in nature for the use of the douche and no argument further than that puerperal fever diminished after their introduction. The women of the present day have not improved in their "getting up" by these means, and, further, I believe that the use of the douche interferes with nature's methods of repairing the injuries of child-birth. It weakens the tissues, and unless something has been left behind by the carelessness of the physician there is nothing that nature has not fully provided for. Again, the douche is advocated to stop the absorption of possibly present poisons. The same power of absorption is present to pick up the drug, and how any Homœopathist who certainly believes in the sixth potency can use any antiseptic solutions and still expect clear-cut indications for his remedies, we don't understand.

The oft-repeated example of the savage and of the hard-working woman is a reproach on the obstetrician more than a sign of weakness on the part of his patients. Let us be prepared to meet diseased conditions when they come, but not cause them, and if our conscience is clear that we have not introduced poison by lack of care, we need not follow any of the fashions of the day. The young doctor is taught, should he use the latest antiseptics and lose his patient, that it was the visitation of Providence, and no fault of his. But if his patient should die under other circumstances he is culpable. Away with such nonsense, and especially by those who have at their command remedies which, when used under our law, in accordance with the teachings of our materia medica, which seems at times to have been written by inspiration, are far more certain as

microbe killers than any of the coal-tar products, and the danger of introducing disease by the obstetrician is far less than of producing disease by Corrosive sublimate added to the hydrant water of the day. That cases have died from mercurial poison is just as certain as that puerperal fever has claimed its victims.

Fortunately, as Homœopathists, our treatment does not depend upon ætiology, and whatever may be our opinion as to that, there is no reason for hesitation as to treatment. As the result of experience, we see no greater reason to fear the result in this disease than in any other severe sickness.

What, I am asked, are the remedies? First of all, Rhus; I never saw a case where it was not called for sooner or later. So constant has been this experience that I anticipate the condition by giving it in the absence of other directly indicated remedies, or when the temperature remains stationary, not improving under previously prescribed remedies. I need not before this body recount the symptoms, but will add the warning that you need not wait for looseness of the bowels to appear before prescribing Rhus, as has been recommended in many cases of typhoid fever. Among other remedies, of course, we have Aconite for the characteristic fear of death and restlessness; Bryonia, when the abdominal tenderness is marked, but this is rarely the case; Hyoscyamus for the involuntary discharge of urine and stools; Belladonna when the head symptoms predominate; Arsenicum for its characteristic pulse and stomach condition. The use of Kali carb. has been verified for the yellow, gushing stools which so frequently present themselves about the fifth day. Should the lochial discharge become offensive, it can easily be corrected by carefully-selected remedies, most likely Carbo animalis. We will state here that if there is reason to believe that there are retained membranes or placenta left in the uterus, the curette is indicated. If spots of tenderness appear on the left side, Lachesis will help; if on the right, Lycopodium. We have known the pain to disappear, not to return, in a very few hours after the administration of these remedies. Frequent sponge baths are advised, their frequency and temperature depending upon the height of the temperature of the patient. The free use of stimulants, in the form of milk punch or brandy and water, and, if nausea is present, champagne. These indications are the result of experience. I can imagine some one saying that we should not have had so much experience had the

doctor followed the antiseptic methods; he would not have seen so much puerperal fever. Let me say, for the gentlemen's satisfaction, that most of the cases which I have seen have been in consultation with other physicians, and that he has never had but one case of the disease in his own practice at one time. Again, the methods which he has used have been uniformly crowned with success.

In conclusion, we will again repeat that we give this as our experience with puerperal fever, believing that it shows that it is possible to treat this disease successfully by strictly Homœopathic medicines after the manner taught by our founder; that if it is followed, the patients will be able to return sooner to a life of usefulness, and, as a school, we have given the patient the advantage of the beneficence of our laws. Physicians may ask, Why should we not avail ourselves of the methods generally recommended? Because if you fail to take advantage of the possibilities of the law, and to give your patient the advantage of the quickest, safest and most pleasant methods of cure, you are not true to your patient, not true to yourself, and can give no reason for belonging to a school with a distinctive name, or to one which has a special auxiliary congress.

PUERPERAL ECLAMPSIA.

By L. C. Grosvenor, M.D., Chicago, Ill.

Happily both for the doctor and his patients this disease is of rare occurrence.

It is a violent convulsion, epileptiform in character, followed by coma, occurring during the latter months of gestation, and during and after labor. Although it is a condition of great peril to both mother and child much can be done in the way of prevention, alleviation, and cure.

Many are the causes which in the past have been assigned for this malady but later research narrows them down to two or three. All causes sooner or later refer to a functional or pathological derangement of the kidneys. Is it pressure of the gravid uterus upon these organs?

Is it pressure of the gravid uterus upon the solar plexus, thus interfering with the renal nerve-supply? For the renal plexus receives a large part of its nerve fibres from the solar plexus.

Is it some peculiar position of the fœtus in utero?

Is it the non-elimination of the uric acid—thus constituting uræmia? Is it albuminuria? The fact that albumen is so constant a factor would lead us to think so. For fifty years albumen has been associated with this disease as its cause and has been so attributed by many noted authors.

But the other fact that eclampsia occurs in cases where little or no albumen is present makes us look for still other causes.

I think we shall find them, as my friend Dr. Tooker once suggested, in the peculiar nervous tendency of certain expectant women.

Some have attributed it to anæmia, especially cerebral anæmia; but the gestating woman is a good feeder, and if eclampsia occurred where long nausea and vomiting had been of daily occurrence, and the system been depleted, we might then regard it as a cause.

That renal insufficiency through pressure upon these organs may be the cause receives color from the fact that eclampsia occurs in

male and twin pregnancies and in persons of contracted pelvis. The male child being on an average larger than the female, for in one hundred cases each of consecutive male and of consecutive female births I found a difference in weight in favor of the male of from one-quarter to one-third of a pound on the average.

That it occurs in primiparæ and especially in elderly primiparæ is evidence in the same direction, for the first distension of the abdomen causes more resistance and pressure—and when these abdominal parietes have settled down to mature life without distension, as in the elderly primiparæ, the resistance is still greater.

That these attacks are due to pressure, in part at least, is supported by the fact that prompt delivery of the child—thus removing this pressure—prevents, in so large a number of cases, a recurrence of the convulsions.

If we are correct in the premise that pressure is a prime cause then we can deduce our prophylactic hints.

Hints.

1. Easy habits of dress, discarding the corset and the bands about the waist, thus relieving the tension here.

2. A semi-prone position in sleep, the abdomen resting upon the couch and not upon the kidneys.

3. Daily massage of the abdominal parietes using warm sweet oil in the process.

4. In the rare cases where peripheral irritation causes the convulsions—remove as far as possible all sources of irritation. These with a proper affiliation of remedies like Arsenicum and Apis will prevent the final trouble in a large majority of cases.

Symptoms.

Among the first symptoms noticed are—a puffiness under the eyes —specks or cobwebs before the eyes—sounds in the ears, swelling of the feet, ankles and also of the wrists.

These symptoms should lead to an immediate examination of the urine and if we find albumen present in any considerable quantities, we should immediately commence our preventive treatment. Our armamentarium is full, complete, and effective to combat this state of things.

My friend, Dr. Tooker, the eminent professor and author, once

met me and said he had a case which promised convulsions at labor, having all the symptoms which precede eclampsia. He urged me to respond promptly if I were called to his aid. A proper affiliation, however, of the remedies in his skillful hands prevented, and he told me later that she passed through the ordeal of labor safely.

Perhaps no agent is so valuable at the time of the convulsions as chloroform wisely administered. It has held many a case in check while the true remedium was doing its curative work.

Perhaps Bell. and Opium are the most commonly indicated remedies.

It seems strange that two remedies so diametrically opposed to each other should be so happily and uniformly efficient in this disease.

Some Consultation Cases.

Dr. S. N. Snider called me in a case of eclampsia. He had delivered the case and hoped that this would terminate the convulsions as it so frequently does—but they continued, and were of a violent and alarming character. Chloroform held them in check while the Bell. was doing its work. This case made a good recovery.

Prof. Tooker called me in another case which was sprung upon him without his previous knowledge of the threatening.

The lady was in a series of frequently recurring convulsions when I arrived. It was a primipara past thirty years, with a breech presentation, the breech having been for some time impacted in the straits.

Some convulsions occurred after the delivery, but under Dr. Tooker's skillful handling of the remedies she made a full though tardy recovery. Later she moved west, had another child, and died of puerperal convulsions.

Some months ago I was hastily summoned to an adjoining State. Here I found a lady, 37 years old, seven months along in her first pregnancy, and having had frequent convulsions for some weeks.

There was evident and increasing harm to the sensorium from the long continued strain. After getting a history of the case, I advised an immediate termination of the gestation as the only course offering any hope of relief. In this view the two physicians in charge and also the family acquiesced. At 11.30 P.M. I commenced by dilating the os, using, first, an index-finger and then two index-

fingers back to back. Soon I had sufficient dilation for the application of the forceps. The labor terminated successfully in three and a half hours.

The lady had no more convulsions, regained consciousness, and the doctors in charge wrote me three days later that they had strong hopes of her recovery. She died about two weeks later, as I afterwards learned. And right here let me say that if this renal disturbance is from pressure of the gravid uterus, we have a right to expect relief when that pressure is removed; but if the convulsions arise from an old Bright's disease, the prognosis is very doubtful.

My Own Cases.

In my own practice I have had but four cases with two deaths in thirty years—a practice covering between three and four thousand cases. The statistics and authors would lead us to expect one in bout five hundred cases, but my experience has been much less.

I think that by early recognition of the danger and a proper use of our Homœopathic remedies, I have been able to prevent several cases.

1. My first one occurred about twenty years ago, in the case of Mrs. H., a primipara.

The convulsions recurred every thirty minutes. After the second I sent for Dr. S. P. Hedges in counsel. He being out, the messenger brought Dr. M. The lady was delivered with instruments, when the convulsions ceased, not to return, and she made a good recovery. The convulsions did not return at subsequent labors. She is at the head of a beautiful family to-day.

2. Mrs. S., from another city, was placed under my care, expecting to be confined in six weeks. She was a primipara, nearly 30 years old. Her eyes were puffy; her hands and limbs were swollen; there were specks before the eyes; also sounds in the ears, occasional vertigo, and frequent micturition.

Asking the husband to call at my office, I had an opportunity to tell him of the danger, and that he must be prepared for trouble, explaining to him as definitely as possible what the dangers were. When within two weeks of her expectation, I was hastily summoned to find her in convulsions of the worst type. They continued at frequent intervals for about eight hours, when, with a violent

convulsion, the trouble ended in death. She was unconscious from the time she was taken, never rallying a moment.

My nephew, A. Grosvenor Thome, assisted me in caring for the case.

3. I was called to Mrs. P., aged 33 years, who had lost all her children a year previously with diphtheria. She had it in a severe form herself, losing some features of her face by blood-poisoning, as her doctors affirmed. This diphtheria probably left a kidney disease, which fatally complicated her gestation, for when about eight months along she was taken with eclampsia, and died in a convulsion the next day. My son, Dr. Lorenzo N. Grosvenor, was with me in the case.

Whether this case should be regarded purely as a case of puerperal eclampsia or as a sequela of diphtheria is a question.

4. Mrs. S., December, 1892, a German, primipara, large and strong, and 24 years old. When the confinement engagement was made there was some indication of kidney trouble, but the family, being poor, objected to what they called unnecessary visits.

I was called about 7 in the evening, but found her only skirmishing, and went to another labor case. At 12 I left my case and saw her again, this time leaving my assistant, Dr. Wallace F. Grosvenor, in charge till I should complete the other case.

Towards morning she became tired, fretful, and nervous. At 6 A.M. she had a severe convulsion, and they occurred hourly till 8 A.M. My son gave chloroform immediately, and held the case well in hand till 8 A.M., when I applied the forceps at the superior strait and labor was terminated in about thirty minutes. Convulsions followed at 9 A.M., 12.30 and 5 P.M., and during the evening she had three more, the Bell. and the chloroform holding them in check somewhat.

I then prescribed rectal suppositories, each containing

Ex. bell., ...	$\frac{1}{4}$ grain.
Morphia sulph., ...	$\frac{1}{8}$ grain.

To be placed every three or four hours.

She had two very nervous and sleepless days, when she commenced to gain, and made a rapid and perfect recovery, being up and about her house in two weeks. The child was a female; weight, ten and a half pounds; strong and healthy.

PUERPERAL INSANITY.

By M. D. Youngman, M.D., Atlantic City, N. J.

Puerperal insanity is commonly divided into three varieties:

1. Insanity of pregnancy, appearing during the term of gestation.
2. Puerperal insanity proper, occurring soon after delivery; and
3. Insanity of lactation, occurring during or after the continuance of prolonged lactation.

In my belief, the first and last of these varieties should not be classed as puerperal, as they are usually due to some cause other than the puerperal state, which latter stands in the relation of precipitating cause only. There is an inherited predisposition, neurotic or hysterical foundation, syphilitic taint, or an exhausted devitalized state, and the puerperal state is no more an ætiological factor than any non-puerperic cause of exhaustion, mental or physical.

The second variety, or puerperal insanity proper, occurs more or less suddenly after a recent accouchement, and is a septic condition. It is almost always maniacal in type, especially if accompanied with much elevation of temperature and the other symptoms of septic intoxication, while those cases (decidedly in the minority) which take on the melancholic type are the outgrowth of a less active involvement of the system with the septic poison and accompanied by the usual symptoms of asthenia. In the cases of pure puerperal insanity that have come under my personal observation there has been no doubt of the septic origin of the disease, as evidenced by the condition of the sexual organs, the veins, the breasts, the development and course of the symptoms, the reading of the thermometer and the other evidences of septic absorption.

The two following cases will illustrate the two types:

Mrs. N.; æt. 30; multipara; nervo-sanguine temperament; delivered with forceps after a tedious labor; did well until the fifth day, the night following which she was restless and did not sleep; temperature on sixth day, 101°. Became possessed with the delusion

that another child had been substituted for her own by the nurse, with collusion on the part of the attending physician, upon the entrance of whom into her room she would develop paroxysms of intense excitement, although toward the nurse she maintained a tone of imploring entreaty, as though she might in this way induce her to restore, through pity, her own babe. Examination showed a diphtheritic inflammation of the vagina; the womb was enlarged somewhat and not particularly tender, but much pain along the course of the saphena veins in the thigh was complained of.

Her temperature for a period of four weeks was often up to 103.5° and was rarely below 100°, at which times of depression there was distinct sweating, once or twice profuse. She made good recovery, at the end of three months, under antiseptic treatment and the indicated remedy.

Case II.—Mrs. K.; æt. 35; multipara; was seen by me, with a brother practitioner. On the sixth day, after an easy and natural labor, she complained of chilliness, aching in the back of head, limbs and lumbar region; temperature 100.5°; milk rather scanty, and patient much depressed thereat, fearing that she could not sufficiently nourish her child. This fear became so fixed that in a few days she talked of it to any one who would listen to her. She became dejected, lachrymose and despondent, declaring that God was punishing her by depriving her of her milk for her babe, because she had not desired it, and had striven in the early months of her pregnancy to procure miscarriage. During a period of three weeks her temperature ranged from 97.5° to 101°, no regularity in the remissions. She perspired much, and there was an unwholesome and sickly odor about her person. Examination showed slight laceration of the cervix and perinæum, a single stitch having been taken in the latter at the time of delivery. There was an offensive lochia, not profuse in quantity. She became very morose, refused food, expressed a desire to die, and needed to be watched constantly that she did not execute the threats of suicide which she constantly made. She made recovery after persistent treatment, consisting of antiseptic measures at first, the indicated remedy, enforced feeding, with careful nursing.

Both of these cases were clearly septic in their origin. There was no albumin in the urine of either; there was a history of insanity in the family of the first patient. In fifteen years' experience

I have seen eight cases in the acute or early stage, either my own or in the practice of friends, that, in my estimation, were septic. I have seen a number of others brought to Atlantic City for the benefit of climate, most of them, of course, several weeks or months after delivery, and many of them, in my belief, not puerperal at all, but in whom the puerperal state had been a precipitating cause.

It follows from this:

1. That true puerperal insanity is septic or ptomanic in its origin.

2. That the prognosis based upon this belief and the following out antiseptic measures is much more favorable than ordinarily laid down; and

3. That prophylaxis is of the utmost importance.

As to treatment, I advise quiet, rest and freedom from care, absolute cleanliness of the person of the patient, the intra-vaginal use of

℞. Hydrogen peroxide, ... f. oz. j.
Aqua. therm., ... O. j. or stronger.
M.

The use of Creolin, Hydrarg. bi-chlor., 1–10,000, Permanganate of potash solution, or simple hot boiled water, etc.

If undoubted indications existed of uterine involvement I would not hesitate to make use of the intra-uterine douche, with any of these, particularly the peroxide of Hydrogen, and as a last resort, but not hopelessly late, the inter-uterine curette.

I advise careful and persistent feeding, forced feeding, and not of liquids, which in this condition as in other states of insanity is of little avail, a half pound of solid food being of more value than many quarts of liquid nourishment. As to remedies, we have many valuable ones, and while each case will require careful study, comparison and selection, I may be pardoned for calling attention to a few of those perhaps not so well known, that I have found of value.

Hyosciamine.—Hyoscine hydrobromate. These have been of much value in the manaiacal form, in substance and in potency, and of particular value in many cases in procuring sleep, working admirably in a case where Morphia and Chloral had failed utterly in the hands of an Old-School friend.

Valeriana.—Mother-tincture in water. This is particularly indicated in excitable, hysterical cases.

Scutelaria.—This drug is indicated in the melancholic variety with marked depression, nervous exhaustion, apathy, and characterized by frequent changing of the phase of the symptoms.

Monotropia uniflor.—This remedy is of essential value in cases exhibiting great erethism accompanied by disturbances of the sympathetic nervous system, as dyspnœa, rapid, vacillating pulse-rate, vaso-motor disturbance, etc.

Ammon. c.—One of the best remedies in the maniacal type, to be thought of also if the case should present any albuminuric complications, or uræmic phenomena.

Of course, it is of little use for me to speak here of the value and indications of such well-known remedial agents as Bell., Stram., Lachesis, Arsenic, Aurum, Phosphorus, Ignatia, Stannum, Zinc, Sulphur, etc. Very few cases could be successfully treated without their use.

To summarize then, the treatment that I would recommend, would be:

Asepsis (prophylaxsis).
Antisepsis.
Forced feeding.
The indicated remedy.
Hygiene.

Discussion.

L. C. Grosvenor, M.D.: I want to say a word to this last paper. I want to say just a word in regard to feeding. A few years ago, one of our professional brothers sent for me and I went there to assist. The patient believed everybody was trying to poison her. We gave her oyster broth, milk, soups—in fact we gave her good square meals every day, but the third morning she looked up when we were making preparation for her meal and she said: "Well, I believe I will take my breakfast in the old way this morning." I speak of this to emphasize what the doctor said in his paper.

Dr. Yeomans: In reference to puerperal insanity I cannot quite agree with the doctor that it is the result of sepsis always. It brings one case to my mind where one patient for four successive times, became insane about the third month. She came under my care during the third time. I think I was able to ameliorate her condition very materially, but she had little confidence in woman doctors, and especially in Homœopathic woman doctors, and through a combination of influences, my patient was wrested from my hands. Her child was neglected as all of her children were. For the want of a mother's care they had died in early infancy, and she was

moved to an asylum, and what became of the woman I don't know, but there was no septic influence so far as I was able to detect. I could detect no uterine lesions. There seemed to be some influence affecting the nerve centres that I could'nt really explain.

Dr. Custis: I don't know that I have anything further to say except to mention that during the past winter I had a very peculiar experience. I had a case where traumatism was the cause of a fever, and the first thing I knew I was in the case without knowing it until I got in the room, and the case was so urgent that my attention was demanded. Then there was another case that I referred to in the paper, of diphtheria. Accidentally, without anybody's fault at all, that infected room was used for a confinement case before the first patient had been out of it five days. So I came to the conclusion that in this disease we have one that is contagious in the highest degree; that the disease can be contracted through the larynx, stomach or any other organ, and that it is almost impossible for a physician in attendance upon such a case to rid himself of the poison while thus coming from other cases.

Dr. Dinsmore: Dr. Grosvenor did not mention—at least I did not hear him mention—Veratrum viride. Some regard this drug as the remedy to control the high degree of fever. I will just say, in regard to puerperal fever, that I was unfortunate enough, a few years ago, to have five such cases inside of ten days, and that after that siege was over I did not attend any more for a long time. After that I did not see a case that I thought was carried directly by the physician.

Dr. Yeomans: I have had quite a number of cases of puerperal eclampsia, and I just want to say that I have had excellent results with Hyoscyamine, and when I hear this subject spoken of, that remedy always comes to my mind, and I find it an almost invaluable medicine.

Dr. Grosvenor: In a Homœopathic convention from all the United States and Canada and the West, it seems like a work of supererogation to speak of remedies, and I only alluded to the prophylactic management.

Dr. Youngman: Mr. Chairman, in closing the paper, I can only answer Dr. Yeomans, of Iowa. I think the case she refers to as occurring three or four times, was one of those that I speak of. I don't believe much in puerperal insanity. I think it is insanity incurred from some other cause, or some excitement, or from a predisposing cause.

SOME OF THE DISEASES PREVENTING AND COMPLICATING PREGNANCY.

By Henry C. Aldrich, M.D., Minneapolis, Minn.

Sterility.—DeSinety, Treub, Fürbinger, *et al.*, attribute 50 per cent. of unproductive marriages to the husbands, saying that sterility in the male is more often the cause of barren marriages than is generally supposed.

This cause of sterility I pass by, as also sterility due to mechanical obstruction, incomplete ovulation and the numerous other causes of this condition, too manifold for mere enumeration, to consider obesity as a causative agent in this condition. I need not say that the advocates for surgical interference for the relief of this condition are legion. Sims makes the assertion that sterility can be cured by surgical means only. That, of course, is Allopathic arguing pure and simple. Cases requiring surgical interference do arise, but any treatment which raises the nutrition of the entire organism, improves the blood-formation, and favors the resorption of pathological products in the sexual organs, is to be regarded as the indicated remedy.

Published statements are my authority for saying that excellent results have followed the administration of drugs, nevertheless; and in complete defiance of all therapeutic measures, a certain percentage of women remain barren; for with the more occult causes of sterility we remain, as yet, unacquainted, consequently they cannot all be reached with any kind of treatment whatever.

The following case I report somewhat in detail. Whilst not an exceptional case at all, it bears directly upon the subject under consideration, and possesses, it seems to me, some decidedly interesting features. My object in selecting this particular one is to call attention, if possible, to a condition not sufficiently considered. Mrs. J., æt. 26, married about two years and a half, appealed to my knowledge for a reason as to why she remained childless. The lady was carrying an excess of flesh, being under the medium height, and

weighing 186 pounds, but appeared to be in good health; family and previous history all that could be desired. Examination showed none of the common causes of sterility; neither, so far as I could ascertain, was the husband responsible for this unproductive condition of affairs. Some previous experiences of my own, with the added testimony of other and able men, was my reason for charging this condition of things to the excess of flesh, this, by the husband, being laughingly charged to excess of laziness.

We all, undoubtedly, are familiar with that peculiar disease of the blood-corpuscles which, whilst producing flesh, relaxes at the same time the muscular force; acting also, I believe, upon the muscular fibres of the uterus and upon the ovaries, inducing not only serious menstrual disorders but sterility. McKee, Philbert, and others give several instances of sterility chargeable to obesity, the women in question having been married several years without bearing children, and all became mothers after losing a portion of their flesh. If any other argument were needed in support of this theory we might turn to the quadrupeds, where we find the poorest breeders among the fleshiest animals. Fournel has a very able treatise on "The Effects of Obesity on the Menstrual Functions and Parturition." Without having had any actual case of this description to deal with, he inclines very strongly towards the belief that obesity favors sterility. In the treatment of the case before mentioned, the patient was subjected to a daily massage of the entire body, with a special pelvic massage three times a week. This, in the main, consists in elevating the uterus as high as possible with the finger in the vagina, ending with a quick and decided vibratory motion. The diet received particular attention, as at this time there was a slight gastric ailment. The indicated remedy, Thuja, was given in the minimum dose. At the end of three months almost thirty pounds of flesh was gone, a considerable reduction. As an experiment, I recommended coitus in the knee-elbow position, advising that the lady remain quiet as long as possible after coition, with thighs well flexed. She became *enciente*, but miscarried at eight weeks. There was, comparatively speaking, but little pain and not much subsequent hæmorrhage. She made a rapid recovery. Since then a living child has been born to them.

I believe I am safe in saying that this result would hardly have obtained were it not for the prophylactic measures adopted.

At the end of the first two months the patient was attacked with hæmorrhage. A similar occurrence took place at irregular intervals during the following five months, the quantity of blood lost being much greater than that at the normal menstrual period.

For the greater part of the last five months she kept her bed, at the end of which time the tendency of the uterns to empty itself could be resisted no longer. A seven months' child was born, and is to-day doing well.

Pseudo-cyesis, cerebral pregnancy, phantom pregnancy (whatever name we may call it by) is a disease which must come under the head of those "complicating pregnancy." Mrs. M., a lady, married two or three years, æt. 29. Previous history good, always enjoying perfect health. When I first saw the lady in question she was a perfect picture of health, and, according to appearances and her own statements, about seven months pregnant. I made no examination. This appeared to be a thorougly intelligent woman, and, according to her own statement, there was cessation of the menses. There certainly was an enlargement of the abdomen and breasts, a milky secretion, and the lady was sure that she felt fœtal movement. On February 28th of the present year I was called to attend her in labor. Examination showed that no pregnancy existed. So far as I could ascertain there was no assignable origin for this condition other than nervous influences, the phenomena being purely muscular distension of the abdomen.

Mayham reports a case of a woman 73 years old, claiming to be pregnant; he also claims that subsequently she was delivered of a child; this is an Allopathic report, however, of which we will take a Homœopathic dose. Haultain reports three cases of cerebral pregnancy. In the first, he says no cause whatever was to be found; in the second, there was cancer of the uterus; in the third, there was a small fibroid growth in the anterior uterine wall. Hauck reports a case where the vomiting, peristalsis, and flatus, caused by alcoholism were supposed to be caused by the pregnant state. Such cases are uncommon, but they emphasize the importance of making a thorough examination, in all cases where positive information is desired of the existence or non-existence of pregnancy.

Hyperemesis Gravidarum.—An animated discussion, held recently between two celebrated Allopaths of Stuttgart and Leipsic, has served to awaken a renewed interest in this subject, without in the

least adding anything new to our stock of knowledge regarding its ætiology. Notwithstanding the frequency of the vomiting of pregnancy, its very distressing character in many instances, and its imminent danger, we find but very few contributions of any value, to either the ætiology of the disorder or its therapeutics. I do not expect to add anything specially new myself, but it does seem to me that our knowledge of the vomiting of pregnancy, is to say the least, in a most contradictory state. Some physicians look upon it as a trifling matter, others as a thing to be endured, and some—these are in the right too—view even the mildest cases with gravity. Even in the mildest cases of morning sickness there is a constant drain upon the nervous system, putting the sufferer into a condition, in which she is very much less able to endure parturition than she would otherwise have been.

Dr. Harrison Mettler says: "After careful inquiry I find that women who suffer from much morning sickness have as a rule, tedious or otherwise troublesome labors. I have observed in multiparæ that at one time they will have much nausea and vomiting followed by a difficult labor, while at another time they will be quite free from the vomiting, and will pass through the succeeding labor with comparative ease." I must say my observations make me agree with Dr. Mettler entirely; when one thinks how rapidly the mildest of cases assume pernicious forms, indifference is certainly no longer to be excused. There is a voluminous literature upon this subject, and many and varied are the ætiological reasons given for this very variable affection, a large majority of writers coinciding in the opinion that "many causes operate together," to produce what we are pleased to designate the "vomiting of pregnancy." I believe myself that in a large percentage of cases, this pernicious vomiting is simply the result of a reflex neurosis. Undoubtedly uterine displacements frequently cause vomiting; but when this is so, and the displaced organ is raised by packing the vagina with aseptic wool, the vomiting ceases.

Lillie reports a number of cases, where obstinate vomiting was caused by a retroflexed uterus, and restoration of the organ caused a cessation of the disorder. Bezugloff having a persistent case of morning sickness, introduced a bougie into the uterus, the intention being to produce abortion; the immediate result was a stoppage of the vomiting, and the pregnancy went on to full term.

In the case just cited, I must say that I believe it was the fright, caused by the thought of abortion being performed, more than the effects of introducing the bougie, which operated so successfully; I say now, as I said before, I believe that the pre-eminent cause of this kind of sickness must be looked for in the nervous system. Flint speaks of this form of sickness as being decidedly neurotic in its origin, and cites a number of cases of a chronic variety of dyspepsia frequently occurring in young girls. I had one such case come under my personal care. There was a persistent morning sickness, with this young lady, and a disagreeable nausea whenever food was taken; this patient was at some distance from her home, in a boarding school, and she will probably never know that the lady principal entertained very grave thoughts at one time in regard to her virtue. It certainly was very difficult to differentiate between this and the vomiting of pregnancy; it was, however, simply due to a vitiated nervous system. My theory is supported by Alt, who records a number of such cases; I cite one only, the case being that of a highly hysterical woman, six months pregnant, suffering from the gravest vomiting, and anxious that miscarriage be induced. She was making preparations for entering the hospital for this purpose, when one of her children was seized with pneumonia. The anxiety felt over the child, forced all thought of self from the mother's mind; from that moment the vomiting ceased and she remained well until the termination of pregnancy.—*Münchener Medicinische Wochenchrift.*

Whilst saying that I believe this disease to be in the majority of cases of purely nervous origin, I would not imply thereby that it is not to be feared, far from it; if neglected, we know how likely it is to pass quickly beyond treatment and our patient succumb from sheer exhaustion.

In the treatment cited such as insertion of bougies, dilation of the os, pelvic massage, etc., I believe it is merely the "doing something," no matter much what it is, so long as you have gained the confidence of your patient, that does good. We have seen how suddenly hyperemesis will cease if the patient be alarmed; it may be, has often been, and will be again, cured by a process akin to suggestion. Kattenback had a case where the patient, a primipara, was seized with an incorrigible vomiting. It was suggested to her that her stomach contained some lumps of unwholesome material and

their removal would cure her. Some milk was given her, and the stomach ceremoniously washed out. Its contents bore no indications of either over-acidity or abnormal ferment. She was informed that she was all right and the vomiting would not return; neither did it, and she was safely delivered at term.

There is a familiar and now well-known phenomena, by which these neurotics can be influenced; I speak of hypnotism; it is due to purely subjective conditions.

There is an identity of the hypnotic susceptibility with the condition of hysteria, and it is along these lines that we can work. Just as many times as I have tried this method of treatment, for these cases of excessive vomiting, just so many times has it given me gratifying results.

The patient can be put to sleep by bi-ocular pressure, and the idea of cure suggested; the operation may have to be repeated several times, at intervals of a day or so, but you will be rewarded by the cessation of the vomiting, often with but one suggestion. Where the patient is not easily controlled by means of the bi-ocular pressure, Luy's revolving mirror is a never failing resource.

REPORT

OF THE

SECTION IN CLINICAL MEDICINE.

CHICAGO, Friday, June 2, 1893.

THE Section in Clinical Medicine of the World's Congress of Homœopathic Physicians and Surgeons assembled in the Hall of Washington, and was called to order at 3 o'clock P.M., by Charles Gatchell, M.D., of Ann Arbor, Mich., the Chairman of the Section.

As the first business in order, the chairman delivered his opening address, entitled:

"Recent Discoveries in the treatment of Disease by the Use of Disease Products, and their Relation to Homœopathy."

J. Montfort Schley, M D., of New York, N. Y., read a paper entitled "A Plea for Early Operation in Pleurisy with Effusion." It was discussed by Drs. Oscar Le Seure, of Detroit, Mich.; J. W. Dowling, of New York, N. Y. (whose remarks were read by Dr. H. W. Westover); A. A. Whipple, of Quincy, Ill.; W. H. Burt, of Chicago, Ill.; E. R. Eggleston, of Cleveland, O., and by Dr. Schley, the author of the paper.

Then followed a paper on "The Prophylaxis of Cholera," by Dr. B. N. Banerjee, of Calcutta, India.

"Cholera—Its Curative Treatment," a paper by Dr. P. C. Majumdar, of Calcutta, India, was read by its author. It was discussed by Drs. W. J. Hawks, of Chicago, Ill., and J. H. Henry, of Montgomery, Ala.

The Chairman then announced a paper by Conrad Wesselhoeft, M.D., of Boston, Mass. entitled "Some Observations on Neurasthenia and its Treatment." He stated that the essayist had been under the necessity of returning to his home before the time fixed for the meeting of the section, and that therefore the paper would be read by Dr. J. C. Wood instead. Dr. Wood read the paper and discussed it.

"Bright's Disease," a paper by Dr. P. Jousset, of Paris, France (translated by Dr. Clifford Mitchell, of Chicago, Ill.), was presented by title, with a discussion by Dr. Geo. M. Dillow, of New York, N. Y.

"The Scientific Clinician" was the title of a paper by J. P. Sutherland, M.D., of Boston, Mass. It was presented by title, together with a written discussion of the subject by Dr. George B. Peck, of Providence, R. I.

The following were also presented by their titles without reading:

"Biliousness," by F. H. Orme, M.D., of Atlanta, Ga.

"The Curative Action of Homœopathic Remedies in Cases of Organic Disease of the Heart," by John H. Clarke, M.D., of London, England.

"Moist Heat as a Therapeutic Agent," by W. A. Edmunds, M.D., of St. Louis, Mo.

"The Study of Homœopathy as a Distinct and Commanding Department of Medicine," by John C. Morgan, M.D., of Philadelphia, Pa.

"The Homœopathic Treatment of Tabes and Pseudo-Tabes," by Alexander Villers, M.D., of Dresden, Saxony.

The meeting of the section was then, on motion, adjourned.

INAUGURAL ADDRESS IN CLINICAL MEDICINE.

Recent Discoveries in the Treatment of Disease by the Use of Disease-Products, and their Relations to Homœopathy.

By Charles Gatchell, M.D, Ann Arbor, Mich., Chairman.

The century now drawing to a close will pass into history as an era of wonderful advance. Never before has there been such ceaseless activity, such painstaking investigation in man's efforts to discover and to control the forces of nature. Medicine shares in this spirit of discovery, and in the world of therapeutics the present is a period of great unrest.

In the Homœopathic school this activity is displayed not so much in the addition of new therapeutic agents to our already extensive list, as it is in a movement to systematize our present records of drug pathogenesy, to expunge that which is faulty, and to place what remains in a shape to be efficiently used. Faith in Homœopathic methods was never stronger than it is to-day. It is this very faith that inspires the demand that the source of our therapeutics shall be reliable and authoritative. To this end effort is directed.

On the other hand, in the dominant school little confidence is shown in prevailing methods of treatment. New remedies are being eagerly sought, only to have brief title, to be as quickly abandoned.

This, also, is in keeping with the spirit of the day. Every new method of treatment that is introduced is submitted to test by thousands of experimenters. If wanting in merit, it is soon rejected.

It is investigation of the nature indicated that gave to the medical world the synthetic antipyretics, which for a time enjoyed high favor. At last it was found that antipyrine has no power to control or to inhibit the heat-making process—it only promotes heat elimination. The salicylates have no specific action in rheumatism—they

only obtund pain. With the fall of these two drugs from their temporary pedestal, less faith is reposed in the class of remedies to which they belong.

But investigators are not idle. Efforts, however, have taken another direction. After the lapse of a hundred years the medical world has turned its attention anew to methods closely allied to that discovered by Jenner, the treatment of disease by agents which are the products of disease. Inspired by the demonstrated success of Pasteur in the preventive treatment of rabies, experimenters are industriously working in this promising field. Necessarily, experiments are confined almost entirely to the lower animals, but the results obtained are, in many cases, definite, and give promise that man may yet be made the beneficiary. In the lower animals infectious diseases, artificially produced, that usually end fatally, may be led to a favorable termination by the injection of micro-organisms derived from other and similar infectious diseases, or even by the injection of the micro-organisms of the same disease.

Again, it has been found that immunity to certain diseases may be conferred on animals by the injection of micro-organisms or their products—a state of immunity without which the animal would perish when attacked by the original disease. The injection of the blood-serum taken from an animal already in a state of immunity has been found to prevent the fatal effects of certain toxines when introduced into the system of the susceptible animal. A number of cases have been reported of recovery from tetanus after the injection of Antitoxin, a substance obtained from the blood of dogs artificially rendered immune to the infection of tetanus.

From knowledge gained by experiments of this class, it is probable that new and valuable methods for the prevention and cure of disease will be developed. The results already attained are striking and significant. They are in line with the work accomplished by Jenner and Pasteur.

Of new therapeutic methods none surpasses in interest that introduced by Murray, of England—the treatment of myxœdema by the administration to the patient of Thyroid extract. It having been conclusively shown by Mr. Victor Horsley, in 1884, that myxœdema is due to loss of function of the thyroid gland, Murray conceived the idea of treating the condition by the injection of Thyroid extract. In October, 1891, he reported his first case, which gave very

satisfactory results. Since that time Murray and others have treated altogether a large number of cases, and it is now possible to form some estimate of the value of the treatment.

The method pursued, as first devised by Murray, was to inject subcutaneously a Thyroid extract, made by macerating the recently removed thyroid gland of the sheep, which is then treated with Glycerine and a weak Carbolic acid solution. A dose, consisting of from ten to twenty-five minims of this extract, is slowly injected beneath the skin. But, since the hypodermatic injections are sometimes followed by abscess, Dr. Hector Mackenzie, in October, 1892, adopted a modification of Murray's treatment, which consists of feeding to the patient the extract, or even the gland itself. It is found that the results obtained are fully as satisfactory as those following the use of the subcutaneous injection of the extract. To the present time the gland has been used in four different forms—as an extract, a powder prepared by desiccation of the extract, the raw gland, and, most remarkable of all, the gland after having been fried. Thus it would seem that the active principle contained in the gland is not destroyed even by heat. Used in any one of the forms named, the remedy seems to be equally efficacious.

As a result of this method of treatment, many cases of complete recovery from myxœdema have been reported by competent clinicians.

The time required in order to bring about a cure varies in different cases from several weeks to several months or a year. At the end of the period all signs of the disease have disappeared; the œdema subsides, the face and hands become natural in size, the speech is restored, the spirits brighten, the temperature rises to normal, the skin becomes soft, smooth, and moist, and, most conspicuous of all, the previously bare scalp becomes covered with a heavy growth of hair. In a word, all lesions and symptoms of the malady disappear, and the patient is restored to perfect health.

The size of the dose of the gland or its extract, it is found, must be carefully regulated in order to obtain the best results. An excessive dose produces cardiac irregularity, syncopal attacks, and can even cause death. But, administered with the care that would be given to any other agent, it is safe and efficacious.

It may be announced that a specific for a heretofore incurable chronic disease has been found. There is but one qualification that

must be made, but that is a serious one—the recovery is not permanent unless the treatment is continued throughout the lifetime of the patient.

But, notwithstanding this one disadvantage—the necessity for the continued use of the remedy—Murray's method of treatment of myxœdema may be said to be a great therapeutic triumph.

The mode of action of the Thyroid extract in the disease in question would seem to be not difficult to understand. It has been pretty conclusively shown, by the researches of Mr. Victor Horsley, that the thyroid gland plays an important part in keeping the blood in normal condition and in maintaining the natural metabolism of the tissues. The thyroid gland thus imparts to the blood some element or principle that neutralizes the tendency to the peculiar degeneration of tissue that occurs in the diseased condition known as myxodema, and it is shown that this same element or principle can remove the degeneration after it has once occurred. The Thyroid extract and the gland, when ingested, evidently supplies to the blood the principle that is wanting by reason of loss of function of the gland in the victim of the disease.

It might be a satisfaction to be able to find some Homœopathic relation of the remedy to the disease in this instance. But this can hardly be done. On the contrary, it seems to be an instance of the revival of an ancient practice under more scientific auspices, the treatment of conditions depending on damaged organs by the administration of such organs or their secretions. The method under consideration, therefore, is a marked example of the treatment of disease according to isopathy. The term isopathy is applied to two distinct practices. One of these, and the one applicable in the present instance, is "the theory of curing a diseased organ by the use of the analogous organ of a healthy animal."

Hence, we must conclude that the treatment of myxodema by the use of Thyroid extract is the practice of isopathy.

There is another therapeutic agent, of comparatively recent introduction, belonging to the class of those which are the product of disease action that is well worthy of consideration at this time. Following the lead of Pasteur, investigation in this field is now very active, and renewed attention is being given to the agent indicated. I refer to that which has been isolated and presented to the profession by Koch—Parataloid or Tuberculin. Notwithstanding the

premature announcement of the alleged virtues of Tuberculin and the extravagant claims made in its favor, there is now evidence that would seem to indicate that it will yet prove to be a remedy of great value. If this be true, it will have a definite place in the Homœopathic Pharmacopœia. It is for the purpose of reviewing what has already been done in this direction that the subject is now brought to your attention.

The substance under consideration—Tuberculin—is, probably, the most powerful agent ever introduced into medicine. In describing its action, Hime says: "It is a tremendously powerful substance. An ordinary injection represents 0.001 mgr. of the liquid. This contains only about the 1–1000 part of active material, or about the fifteen millionth part of a grain. Yet this infinitesimal fraction can set the whole body of a man weighing two hundred pounds in such a state of change that the whole is raised to a temperature of 104° or 105° F. The weight of the mass thus affected is infinitely greater than that of the active agent, the exact proportion being about 1–98,000,000,000.

No other substance known to medicine will, in so small a quantity, produce such profound effects. Atropine, Aconitine, Glonoin, and even the snake-poisons, in like minute quantity, would produce no perceptible systemic disturbances.

Tuberculin is a glycerine extract of a pure culture of the bacillus tuberculosis. And yet it appears that it is not identical with any ptomaine produced in the organism by the bacilli in the process of disease. Its exact character is not defined. The active principle seems to be closely allied to proteid bodies. That it does not belong to the group of so-called Tox-albumins is indicated by the fact that it resists high temperatures and can be readily dialyzed. A precipitate is obtained by the use of 60 per cent. alcohol, which gives a snow-white mass that is almost pure Tuberculin.

This new remedy possesses one property that adds much to its interest. The universal testimony is that it has an elective affinity for tuberculous tissue. Koch says: "There is a general consensus of opinion that the remedy has a specific effect on tuberculous tissue." To this may be added the testimony of Virchow, who says: "It acts in a remarkably selective way." Virchow further remarks: "Evidence of its specific power is found in the marked in-

dications of inflammatory action around ulcerated areas and in contiguous lymphatic glands."

In order to assign this powerful agent, Tuberculin, to its proper place in the Homœopathic Materia Medica—if it is entitled to any such place—two things must be determined: first, the nature of its pathogenetic effects upon the healthy; and second, its curative action when applied according to the indications of these pathogenetic effects.

Unfortunately, there have been no systematic "provings" of Tuberculin, and we must, for the present, depend upon the records furnished by a few experiments. It will be seen, however, on examination of these records, that the pathological effects of Tuberculin are more or less constant and uniform.

In the subject of tuberculosis, the injection of a small quantity of Tuberculin is followed by a most profound disturbance of the system. There is great and rapid rise of temperature, and, as set forth by Virchow, increased destruction of tubercular tissue, with its absorption and dissemination throughout the body. This is accompanied by great aggravation of the disease from which the patient already suffers. But it is the effect of the remedy in the healthy subject that we are interested in inquiring into. Koch relates the results of such experiments. The first subject was Dr. Kitisato, who, June 24th, received an injection of two milligrammes. Four hours after the injection an attack of coughing came on, which continued for three hours. Five hours later, or eight hours after the injection, the temperature was affected, and gradually rose from 97.7° to 100.94° F. The pulse rose from 72 to 92, and these symptoms were attended by headache, languor, and perspiration.

Dr. A. Wasserman received, June 25th, an injection of 3 milligrammes. In the course of eleven hours his temperature rose from 98.06 degrees to 101.66 degrees F., and his pulse from 80 to 92.

Dr. H. Mass received, July 13th, an injection of 4 milligrammes. In the course of the twelve hours his temperature rose from 98.6 degrees to 102.0 degrees, and his pulse from 72 to 100. He had slight rigors, a feeling of heat, perspiration and vomiting.

Dr. P. Guttman, July 28th, received an injection of 8 milligrammes. Within eight hours his temperature rose from 97.7 degrees to 102.56 degrees F. The pulse rose from 78 to 135. This was accompanied by rigors, heat and sweating.

From these records it may be seen that the pathogenetic effects of tuberculin are as constant and uniform as are those of arsenic, opium or other drugs with known specific action.

The character of its effects may be thus summarized:

After a period of about eight hours from the time of the injection, the reaction begins. First, there is lowering of temperature, followed by a rise, reaching its maximum in about twelve hours. Other constitutional symptoms are: chilliness or rigors, headache, pain in the back or through the body, nausea, vomiting, prostration. Another noteworthy symptom is that there is a short, dry cough, even in provings on healthy subjects, those whose lungs are sound.

Those symptoms subside after twenty-four or forty-eight hours. Provings have not as yet gone beyond the point here indicated. If pushed further, the indications are that it would produce most profound disturbance and even endanger life.

Let us now examine the records of the use that has been made of tuberculin by Homœopathic physicians.

Reports of cases treated have been made by Drasche, of Austria; Furbringer, of Germany; Jousset, of Paris; Burnett, of England, and Arnulphy, of Chicago.

Drasche treated fourteen cases, six of which were improved and eight aggravated. Furbringer treated forty cases, three of which were cured and fifteen ameliorated.

Dr. Arnulphy's cases are of exceedingly great interest, both because of the favorable results attained and because they include cases of acute tuberculosis.

The first case Dr. Arnulphy reports is of a young woman, 26 years of age. For six or seven months there had been slight symptoms of pulmonary trouble, consisting of dry cough and emaciation. Suddenly her symptoms became acute, and the disease made rapid progress. She showed great weakness, pallor, great emaciation and almost incessant cough, rapid breathing, temperature of 105 degrees F., profuse perspiration at night and abundant diarrhœa. Over the right lung the respiratory sounds were obscure. The left lung was much affected; at the apex there were moist râles, surrounded by a zone of sub-crepitant râles; at the base, bronchial bubbling râles. The diagnosis was acute tuberculosis and the prognosis grave, if not fatal.

Tuberculin was prescribed. From the first dose the cough abated, the breathing became easier, and in a few days the patient's condition had so much improved in all respects that she was pronounced to be out of danger. Two weeks later she was out, and shortly after left her home in Chicago and made a journey to the far west. The woman is still living.

Dr. Arnulphy reports four other cases, all of acute phthisis, which were treated successfully, most of which are as remarkable as the one already detailed.

As a result of his experience, Dr. Arnulphy remarks: Judging by the success achieved, I am justified in saying that the proper field for the activity of tuberculin is acute tuberculosis—precisely those cases which Koch and his followers persistently, and, from their standpoint, consistently refused to treat with the lymph, on account of the reaction that they dreaded."

Burnett, of England, reports a number of cases cured; but his records are so wanting in scientific precision that it is impossible to give a satisfactory summary of the results.

The question of great interest is: Is the action of tuberculin in the cure of tuberculosis Isopathic, or is it Homœopathic?

In order to answer this, it is necessary again to define the term.

Isopathy may be said to be "The treatment of disease by one or more of its own products."

One lexicographer, in illustrating this definition, says: "Thus, smallpox should be treated by the administration internally of the various excretions."

If Koch's tuberculin has a curative action in tuberculosis—as would now seem to be established from the experience of those Homœopathic physicians who have already reported on the subject—it follows that the action is *isopathic, if the tuberculin of Koch is a product of the diseased process known and recognized as tuberculosis.*

Let us see if this be true. Koch's tuberculin is a preparation made from a pure culture of the bacillus tuberculosis. The bacilli used may be removed two, three or even one hundred generations from the original. A glycerine extract of the medium of culture is made; this is filtered through plaster-of-Paris, and from this an alcoholic precipitate is obtained, which, in attenuation, is the medicinal preparation employed in the treatment of disease.

That the preparation thus obtained is not a product of disease is

evident. It is a product of the artificial cultivation of a certain bacillus, which may be removed a hundred generations—yes, a thousand, an indefinite number of generations from the original. It is not a product of disease; it is a product of the test-tube.

But if the product thus obtained were identical with the ptomaine produced in the lungs or other organs in disease, we could not then deny the isopathic relation of the remedy to the disease. But the evidence furnished by the pathogenetic action of tuberculin does not support this view. Burnett truthfully says: "If you alter somewhat two things that are identical, then the identity becomes similarity."

If the ptomaine produced in the system of the tuberculous patient were identical with that produced by the culture process followed by Koch, a minute quantity of it would speedily overwhelm the system. This does not occur. It is safe to say that the amount of the ptomaine produced in the system of the victim of tuberculosis is almost without limit. If this product were identical in nature with the tuberculin of Koch, tuberculosis would, in every case, be one of the most rapidly fatal of all diseases; the duration of the attack in every case would be but a few days, instead of weeks and months and years, according to its present history.

Of the artificial product, tuberculin, the 0.001 mgr. will produce the most profound effects upon the system, in a few hours raising the temperature from normal to 104 degrees or 105 degrees F. In the systems of those already affected by tuberculosis, its effects are even more disastrous. Now, if the product of the disease process and of the culture process were identical, then the effects of the two should not differ in any respect whatever. The evidence adduced, therefore, supports the conclusion that the action of Koch's tuberculin in the cure of tuberculosis is not Isopathic, but, on the contrary, that it is Homœopathic.

Jousset says: "Homœopathists only will be able to make intelligent use of tuberculin. We know that it is a powerful agent that has a specific action in tuberculous affections. We know why it is useful in phthisis; it is because, administered in a large dose, it aggravates in phthisis. This is because the remedy is Homœopathic to the diseased condition; that is to say, it is a remedy that will cure a diseased condition similar to that which it produces in the healthy subject. And since it is a Homœopathic remedy, we know

it must be indicated by the totality of the lesions and the symptoms. Consequently, in order to complete its pathogenesy it is necessary to know in what class of cases of phthisis it is indicated and in what it is not."

If the view that I have here set forth is correct, then the conclusion is warranted that the action of tuberculin as a remedy for tuberculosis is not an example of Isopathy. On the contrary, the evidence at hand would seem to indicate that its action is distinctly Homœopathic. This being granted, then it must be accepted as true that Koch's important discovery is but another illustration of the law of similars, and a notable demonstration of the power of infinitesimals in the cure of disease.

A PLEA FOR EARLY OPERATION IN PLEURISY WITH EFFUSION.

By J. Montfort Schley, M.D., New York, N. Y.

Two articles appearing recently—the one by Dr. Barrs, in the *British Medical Journal*, dealing more especially with the dire *results* of pleuritic effusion, the other by Dr. Lindsay, in the *Lancet*, touching more on the advisability of early interference in such cases—have brought out very suggestive points for us to consider.

It is, however, with some hesitation that I have undertaken to direct the attention of this Society to so familiar and well nigh hackneyed a subject as pleural effusion and empyema. I feel somewhat at ease, though, in doing so, because the disease in question, however familiar, possesses an exceptional clinical interest, and because there are many points in its ultimate pathology, perhaps ætiology—and more especially its treatment—around which much controversy has raged and is still raging. It is out of the question to handle exhaustively so vast a subject as pleural effusion and empyema. I will therefore limit my remarks.

There can be no doubt, in my opinion, that there is a strong and growing tendency to employ operative measures by those who see much pleurisy, and who are able to keep track of these sufferers for months or years after their original attack.

It is *only* in this collective method that we shall be able to speak pro and con for early operative methods.

As the best thinking and scientific minds of the Old and some of the New School are busying themselves most with preventive medicine, and then with curative medicine, it seems to us that a more fitting field for such investigations does not exist than in the one under discussion.

In orthopædic surgery much has been learned and discovered within the past ten years—recognizing disease early (by experts), by suitable appliances rectifying deformities, and if they already exist, minimizing them to a marked degree.

In pleurisy a similar picture should be presented.

Unrecognized pleurisy, or pleuritis with effusion, *maltreated* leads to a maiming of the lung, its disability to perform more than one-third of its proper work, phthisis and lateral curvature of the spine, etc.

Curative medicine, then, in such cases must be looked for in two directions: first, as a power to promote recovery from injury of external origin; secondly, as a power to mitigate or remove diseases arising within the body.

And again, we are led in such cases by our old habits of thought to regard life as a thing of the body alone, and to forget that life lies between the body and the medium, and is, as it were, a play of activities between two surfaces, so that the medium needs as much *curative* vigilance as the body does, and is far more within our power and comprehension.

Therefore the *prominent*, and often even *exclusive*, place given to the administration of medicines and the swallowing of drugs is not only questionable, but positively mischievous, in so far as it leads the public, not to mention ourselves, to attach *primary* importance to measures at best auxiliary, and in so far as it blinds us to the far greater importance of studying the earlier and lesser deviation of function, and of readjusting the conditions under which the individual lives exist.

Those of us who may have made many post-mortems or witnessed them attentively, must have been impressed with the great frequency with which adhesive pleuritis was met.

And it seems to me that it matters little where these adhesions are found, but that they must represent just so much mechanical interference with the act of respiration and interchange of oxygenation during the act of respiration.

To properly understand the gravity of *all* pleuritic effusions we should appreciate somewhat the pathology of such cases.

The changes which take place in an inflamed pleura are essentially the same as those met in other serous membranes. The earliest stages are indicated by capillary congestion, and sometimes ecchymotic spots in the subserous tissue, with extravasations of blood into the pleura itself; the membrane then loses its smooth, glossy surface, becoming rough, dull and opaque, and is soon covered by a delicate gray deposit, consisting of fibrin, epithelium and

young cells, and as this deposit increases apparently layer by layer, it becomes yellowish in color.

These changes are observed both on the parietal and pulmonary pleura.

In the *rare* cases in which a more or less diffused pleuritis stops here, and is *not* followed by liquid effusion, the inflammatory products are either entirely absorbed, or—which occurs most frequently —the opposing surfaces become adherent in whole or in part by organized connective tissue, and the sac is obliterated over the adherent areas.

Complete obliteration over the bases is seen chiefly in severe and long standing cases, where absorption has been left to its own judgment, or after empyema.

Méhu and Laboulbène have justly maintained that the ultimate recovery of the patient will proceed more slowly or more rapidly, according as the exudations are more or less fibrinous.

The next step to congestion and fibrinous exudation is the effusion of fluid.

All pleuritic effusions lead naturally to a number of local and general pathological conditions, partly owing to the quantity and quality of the exudations themselves, and partly in consequence of the changes which these exudations gradually undergo. The amount of the exudation will limit the amount of the compression of the subjacent lung, as well as the extent of the displacement of the adjacent organs, as the mediastinum, the opposite lung, the great venous, arterial, and nervous trunks, the diaphragm, the chest wall, liver, stomach, etc.

In fibrino-serous effusions—which are most frequently met with at the onset of all pleurisies—recovery commences in most cases by the gradual concentration of the exudation. In consequence of this the absorption proceeds much more rapidly at the beginning than it does later on. Finally, the fluid portion of the exudation may entirely disappear, and the pleural surfaces, roughened by deposits, come again in contact and often become fused together.

If the process of absorption sets in sufficiently early, the compressed lung again becomes permeable to air and re-expands.

We must still form an accurate idea of the anatomical changes which arise in those chronic cases in which the exudative deposits become organized into connective-tissue masses.

In the course of the pleuritis we note repeated exudations taking place which undergo organization, harden, and finally are found in layers sometimes an inch in thickness.

The serous and sub-serous tissues are often merged into this new formation, and are hard to distinguish from it.

If the pleura pulmonalis is affected, it always appears thicker on section and shrunk on the surface.

This leads to a shrinking and retraction of the subjacent lung tissue, the hilus of the lung forming the centre of the retraction, while the margins of the lung become *rounded* by this pleuritis deformans.

This retraction leaves a free space in the pleural cavity which becomes filled with fluid, which has little chance of being absorbed the thicker the two pleural surfaces become. The pleura, in such a state, rapidly loses its absorbent power.

Thus the capability of expansion in such a lung is *forever lost.*

Again, if the pleura becomes covered with thick false membranes while there is still considerable effusion in the pleural cavity, and before its absorption has been possible, this circumstance hinders its further absorption, and the remainder of the exudation may thus remain for months or years encapsulated.

The thicker and more fibrous the false membranes, the less vascular are they.

This organized false membrane sometimes assumes a pyogenic character, from which pus is continuously secreted. When the fluid effused in the earlier stages of the disease becomes absorbed and no new liquid (serous or purulent) effusions are poured out between the layers of exudation, the lung must, in such cases of pleuritis deformans, diminish more and more in size.

The adjacent movable organs, as well as the thoracic walls, must contribute to the filling up of this vacuum.

The different character of the effusions, whether serous, sero-fibrinous, purulent or hæmorrhagic, all have their important significance.

Anstie and Wagner, from clinical and microscopical work, have found that these false membranes develop *more freely* at first when the opposing surfaces are kept *apart* by the effused liquids. *The running of the two pleuræ together seem to impede the process of organization.*

Wagner betones the fact that these newly-organized and vascular

tissues often become the starting-points of fresh inflammatory processes and of new products.

The question, then, now which presents itself to us, after digesting the foregoing opinions of the most reliable authors upon the constant tendency for pleuritis with effusion to leave the lung *damaged*, is, whether we should be satisfied with remedial measures until the patient is nearly *in extremis*, or shall we, by a timely and simple operative procedure, *speedily* restore our patient to perfect health by removing an exudation which is seldom able to leave the organ as it found it.

Professor Nothnagel tells us that "a cure consists in so modifying pathological processes—be they chemical or physical, functional or dynamic—as not only to arrest them, but to restore to a state of *physiological* and *anatomical integrity* the organs and tissues that have been deranged. The cure (sometimes) can only take place through vital organic processes, and to medicine belongs the task of determining what outside support can be rendered to the *vis medicatrix naturæ*."

The large majority of physicians and surgeons are opposed to operations in pleuritis with effusion during its acme and feverish state. If the orthopnœa becomes intense, the effusion increases rapidly, etc., they may become convinced of the necessity of an immediate relief through aspiration or incision.

In time I feel assured that all pleurisies will be treated by operation where an effusion exists.

The eminent authority on this subject, Dr. Bowditch, of Boston, lays down the rule that if the dyspnœa is excessive, so as to amount to permanent orthopnœa, or if I learn that within a few hours previous to my visit there has been even one attack of momentary orthopnœa, during which the patient felt the breath would be wholly lost, I tap immediately, provided I am sure that there is even a *small* quantity of fluid in the pleural cavity, and that it is, apparently, the chief, or perhaps only, cause of the orthopnœa. "I fear," he adds, "death may occur before my next visit." He states, further on, that "when a patient comes under notice in whom a large quantity of fluid has been long effused, I advise thoracentesis as the first remedy."

During the past year I have seen three cases of pleurisy die suddenly for the want of immediate evacuation of the pleural sac.

In such cases, even during the febrile stages, thoracentesis seems to me the only remedy. Barnes says, "It is my practice to operate at once when the chest is two parts filled with fluid, *without waiting* for urgent dyspnœa."

The propriety of operating in large effusions is being rapidly accepted by the profession generally, but there is considerable difference of opinion, even among enthusiasts for the operation, of the demand or advisability of interfering: 1st, during the febrile stage, and 2d, where moderate effusion remains unabsorbed. During the febrile stage it is maintained by many that the fluid would at once reform, and, furthermore, that the surgical treatment might excite additional inflammatory action. We have very strong evidence to prove that this is not correct.

For example, Castiaux (1873, *Thèse de Paris*) claims that the operation by aspiration will hasten the cure of acute pleurisy and *prevent* the formation of the fibrinous deposits and bands which in nearly all cases, even in moderate effusions, impair the expansion of the lungs. He operated 37 cases, and cured them. The pulse and temperature fell within twenty-four hours of the operation, and the patients improved rapidly.

As soon as fluid was detected he operated by aspiration points, feeling that he had at his disposition sure means of relief which are harmless or nearly so, and that it is useless to leave this task to nature, which she so often cannot accomplish even in a half-way satisfactory manner. Medication is often untrustworthy in such conditions.

He operated at the height of the first or inflammatory stage.

In operating thus promptly he relieved the lung of compression, which must impair its expansion; he removed an effusion rich in fibrine and capable of increasing, in time, the thickness of the neo-membranes; he restored the power to the lung to dilate by removing this tendency to false membrane formation, which squeezes the lung tissue.

These membranes cannot become organized, as I have stated before, as long as they are separated by fluid.

He drew off all the fluid he could. The relief to the patient was often most marked. The lung expanded promptly and satisfactorily, as shown by auscultation. In a few cases the effusion returned, with an increased pulse and rise of temperature; another aspiration effectually arrested the process.

The cases treated in this fashion lasted a much shorter time, and apparently no false membrane supervened.

No accident occurred in any of his cases, and he never saw as a result of the operation the transformation of the serosity into pus.

We have nearly as strong testimony in some cases reported by Moutard-Martin. He operated in twelve cases, of about ten days' standing, with sero-fibrinous effusions, accompanied by fever. In eight there was no reproduction, in four it was very slight, and in none did it become purulent. On the other hand, in cases in existence from twenty to sixty days the fluid was always moderately reproduced.

He insists upon the prompt withdrawal of the fluid as the most successful method, more especially if we suspect the formation of false membranes.

Wedal's results are even more remarkable than those of Castiaux or Moutard-Martin.

He considers puncture harmless during the acute stage, and claims it shows a hastening of the cure.

He operated seventeen times on seventeen patients from the second to the fifth day, and three times from the eighth to the tenth.

In acute cases, where the patients had no pulmonary or bronchial disease, the cure was not protracted beyond the twelfth day. Some were cured by the sixth. His clients were mostly young, vigorous men.

Dr. J. L. Mason tells us that in one hundred and thirty-two cases, where no operation was performed, the duration of the disease extended over weeks and, in some cases, months.

What a comparison to draw between Castiaux, Wedal, Moutard-Martin, and those cases of Mason.

Wedal thinks the earlier the operation is done, the more successful it is likely to be.

Dieulafoy thinks we should wait until the fever ceases.

According to Wilson Fox, the density of the adhesions and false membranes is determined within the first *fortnight* of the effusion.

As to the *ætiology* of pleurisy, we will content ourselves with making the inquiry: Is it due to exposure, rheumatism, or tubercle? Dr. Lindsay found, in thirty-five cases, sixteen of them due to a wetting or exposure to cold while the patient was overheated. Rheumatism was present in three instances. In two cases there was

a family history of tubercle, and in three hæmoptysis of pulmonary origin. In ten cases, or nearly one-third, no cause could be found. Organic heart disease does not seem to induce pleurisy.

The relation of tuberculosis to acute pleurisy is the most important and difficult one.

Dr. Barrs, in a noteworthy article, shows that a very large number of cases of simple pleural effusion are really of tubercular origin.

He hunted up the after-history of seventy-four cases of simple pleural effusion, and found that within five years thirty-two of these were dead, twenty-five were living, and seventeen could not be found. Of the thirty-two reported dead, fourteen died of phthisis, four died of other tubercular affections, and several of the others succumbed to some pulmonary affection.

Leaving out those who could not be traced in Dr. Barrs's report, we have the astounding fact that more than one-half, apparently recovering from a simple pleural effusion, died within five years, and these mainly of some tuberculous affection.

It seems but a fair inference that if these statements are correct and are fairly typical and should be corroborated by others and by wider knowledge and experience, that the ultimate prognosis in simple pleural effusion, so far from being, as it is now commonly regarded, as distinctly favorable, would become most grave.

In Dr. Lindsay's 35 cases only two instances of a family history of tubercle existed and only three instances of pulmonary hæmorrhage. In others the presence of tubercle was suspected, but was not absolutely proven.

The association of pleurisy and tubercle is, therefore, more common than we are in the habit of believing.

The question raised by Dr. Barrs is one of the most important in medicine, and each one of us should sift it to the bottom.

If, then, a patient who has had an attack of acute pleurisy subsequently develops tuberculosis, the question arises whether the pleurisy was *originally* of tubercular origin or whether the damage suffered by the pleura and *lung* have not invited a tuberculosis which did not exist prior to the pleuritis.

I incline myself more strongly to the latter opinion.

The method of the treatment of the pleuritic effusion is here often the cause of the dire results we see following such processes.

All my practical knowledge of pulmonary phthisis inclines me to the belief that if a lung be left collapsed and inexpansile and bound down, as the result of pleural effusion, it is very likely to become the seat of tuberculosis, and that the development of tuberculosis under such circumstances is *no proof* that the underlying process was tubercular from the first.

I must further make the statement that in dealing with the great number of cases of pulmonary phthisis which come under my observation, I have been more and more impressed by the frequency with which pleurisy is found as an antecedent condition.

This is a fact which we *cannot* and *should not* ignore.

It is to be much regretted that we have no satisfactory records to show us what is the *normal* course of pleuritic effusions—moderate and large—without treatment. The tendency is probably to a spontaneous subsidence—*quoad* the effusion *per se*—and the great practical question is whether, by the administration of drugs or operative interference, we can materially hasten the cure. It is now generally admitted that many of the methods of elimination formerly in vogue by the Old School are either useless or injurious.

The testimony of those employing early puncture or advocating early operation gives a far different note of hope to the aggressive element in the profession.

The great question, then, for us in this connection to settle is, not whether aspiration should be performed, but *how soon* must it be done?

In certain cases where the effusion is large and the dulness ascends as high as the second rib in front, or if the measurement of the affected side be markedly increased, much dyspnœa, etc., the advantage of aspiration cannot for a moment be disputed.

I maintain that we should not allow our patient to come to such a pass.

Those cases which present the most difficulty of decision are where we have a moderate effusion with or without fever and with or without dyspnœa or other disturbing symptoms. In such cases the inquiries arise: 1. Does aspiration lessen the chance of a speedy or remote fatal issue? and 2. Does aspiration shorten the duration of the disease, with the immediate prospects of restoring the affected parts to a condition of perfect physiological action?

The first question may be somewhat summarily dismissed as to a

sudden fatal issue where the effusion is *moderate*, but as to a remote fatal issue, where the accumulation has been in existence some time, our judgment must be reserved.

The second inquiry is a very interesting one, but the difficulty of absolutely determining it is very great.

It seems to me that the duration of the malady, in answering the second query, must *first* be taken into consideration.

In cases of several weeks' standing I believe the lung—and *ergo* its pleural surface—never returns to a *healthy* condition.

We must take cognizance, though, in this discussion, of the literature dealing with it. It must shape the judgment of the unexperienced and give a strong support to the man of large experience either pro or con.

One practitioner inclines to tap early in all cases, and to repeat it, if necessary, and his statistics will show the greatest number of recoveries and the shortest duration of illness. His remote results will be the most satisfactory from a medical, surgical and prognostic point of view.

Another practitioner reserves operation for serious cases with large effusions, or for chronic or semi-chronic cases. His remote results will be the most unsatisfactory from a medical, surgical and prognostic point of view.

In empyema most writers agree that aspiration is not the method to employ, but that free incision, with drainage, is the recognized operation in America and the results *quoad vitam* are most gratifying.

In children we should note the marked tendency for pleuritic effusions to become purulent.

As a summary we would state:

I. That aspiration carried out antiseptically in any stage of pleuritic effusion is not a dangerous procedure.

II. More people die from a *postponed aspiration* than from any operative interference.

III. Anstie and Weber have shown that organization of the fibrinous portion of the effusion can proceed very slowly and imperfectly when the two pleural surfaces are allowed to play on each other. Effusion separating the two surfaces hastens the formation of neo-membranes.

IV. Aspiration shortens the illness to fourteen or eighteen days.

V. Pleuritis without operation and with *moderate* effusion lasts seldom shorter than three weeks, and from that up to two months.

VI. With aspiration, the lung pleuræ in very recent cases return to a physiological state.

VII. In semi-chronic, chronic and purulent effusions portions of the pleura and lung are permanently damaged and lead to one form, perhaps the most frequent, of phthisis.

VIII. Early aspiration is growing in favor, and I have witnessed several brilliant cures in my own practice and that of others.

IX. In three cases of large effusion seen in consultation, the operation being postponed until the following day, the patient has expired suddenly in the night.

Discussion.

Oscar Leseure, M.D.: I am heartily in sympathy with the principles advanced in Dr. Schley's paper, and will refer to them specially from the surgical standpoint.

I have failed to find an authority who does not admit the fact that the sooner a lung oppressed by pleuritic effusion is relieved from compression, the more completely will that lung be restored to its normal anatomical and physiological condition.

The opposition to early, or *any*, operation for the relief of pleuritic effusions (and in this sense I refer to serous or sero-fibrinous effusion and the operation of aspiration) is based mainly upon the accidents which have *accompanied* or immediately followed the operation, and which have very unjustly, in many instances, been attributed to it, or on the accidents which might *theoretically* complicate the process.

It is true that the mortality accompanying the early history of thoracentesis was discouraging. Boyer and Gendrin lost 100 per cent.; Dupuytren, 96 per cent.; Davis, 33 per cent. (Donaldson). But from the time when Trousseau urged and practiced thoracentesis with the trocar of Reybard, and Bowditch first used the method of aspiration, down to the present day, the statistics of the operation have so improved that Matas, in 1892, records over one thousand cases without a death.

Of the more important accidents attributed to the operation, we may enumerate the following: Injury to the intercostal vessels and nerves; injury of the liver, peritonæum, heart, or lungs; syncope; cerebral accidents, as paralysis and convulsions; cough and albuminous expectoration; purulent transformation.

We may dismiss the question of injury to the intercostal vessels and nerves by saying that, given a knowledge of their location, the average intercostal space, a proper instrument and reasonable skill, the objection should have no weight.

Injury to the liver, peritonæum, heart, or lungs we cannot dismiss

so lightly, for, with the distinguished names of Aran and Claude Bernardo associated with these accidents, we must admit their importance. Still, with the advanced knowledge and improved methods of to-day; with the results of experience in selecting the point of puncture; also the proof from the statistics just quoted, we may consider the importance of this objection to be in its warning to the operator.

Of four cases of syncope occurring at the time of or immediately following the operation, analyzed by Vergely, Guyot, Chaillou, and Besnier, one was due to heart clot, one to pulmonary embolus, one to phlebitis and thrombosis, and one to pulmonary gangrene. Bowditch and Donaldson have also attributed the accident to the complications existing at the time of the operation.

This accident might be due, also, to a too rapid evacuation of the fluid, thus suddenly depleting the cerebral vessels. A skillful operation will, therefore, remove the only *just* part of this objection.

Cerebral accidents are: paralysis, due to an embolus not directly traceable to the operation, or convulsions possibly due to a disturbed intracranial pressure, in turn attributable to a too rapid or complete evacuation of the effused fluid.

Cough, with albuminous expectoration, due to acute œdema of the lung, is justly charged to the operation, but is a dangerous condition *only* when the operator rashly disregards the warning which is given him, and which was so clearly described in the interesting paper presented to you by Prof. Biggar on Wednesday evening. I refer to the irritating cough, sometimes accompanied by dyspnœa, which may occur during the evacuation of the fluid. That it is an acute œdema of the pulmonary tissue has been demonstrated by Herard, Dieulafoy, Lavaran, Tissier, Moutard-Martin, Dujardin-Beaumetz, and others, and by them ascribed to a too rapid removal of the intrapleural fluid, which, in turn, produces an extensive congestion of the lung suddenly freed from pressure.

Purulent transformation of the fluid remaining after aspiration is the objection most strenuously advanced by surgeons who oppose the operation. Late microscopical and bacteriological researches promise to prove the predictions of Fraenkel and Netter to be well founded, viz., that an early examination of the fluid effused will determine whether it is to remain a serous fluid or whether it is to become a purulent fluid.

The observations of Dieulafoy allow him to state that when the fluid contains five thousand (5000) or more red blood globules to the cubic millimetre, empyema will be the result. More important, and later, are the researches of Baviere, who has demonstrated the presence of the streptococcus in a certain number of cases, the pneumococcus in others, and the bacillus tuberculosis of Koch in others. In

the majority of cases he found no bacilli. His conclusions, based on a large number of cases, are as follows:

1. Early aspiration.

2. If the pneumococcus or bacillus of Koch is found, the puncture is to be repeated if the fluid persists or increases.

3. *If the streptococcus is found*, resort at once to pleurotomy.

Briefly, as to the technique of the operation already described in our presence by Prof. Biggar:

The weight of opinion is in favor of the sixth intercostal space in the middle axillary line as the point for puncture.

The instrument, an aspirator, with the special trocar of Potain or Fräntzel to avoid wounding the lung.

Use absolute asepsis. Withdraw the fluid *very slowly*. Do not withdraw more than a quart at one operation. Stop the moment the patient complains of pain, or cough or dyspnœa appear.

JOHN W. DOWLING, M.D.: After reading Dr. Schley's able argument in favor of early operation in cases of pleurisy with effusion, it is difficult to open the discussion when one is in almost complete accord with the views expressed. I have seen too much of the ill effects following delay in these cases, the delay in some cases being due to timidity and in other cases to failure to recognize the actual conditions present. The disadvantages of delay are many, and by far the most important of these, to my mind, is the fact that every day's persistence of the fluid in the pleural cavity adds to the chance of that fluid becoming purulent, thus creating an empyema out of a simple serous effusion, or sero-fibrinous perhaps more frequently than simple serous. Every one admits that an empyema is a more grave condition, and it seems negligent to fail to resort to operative measures early, the result being the not unlikely development of the more serious condition, with its consequent dangers to the life of the patient.

As your speaker has said, many are not in favor of operation when moderate effusion remains unabsorbed. It seems clear, that if the consequences of the prolonged presence of this fluid were properly considered, the number of those who hold this opinion would be materially diminished. The presence in the pleural cavity of even a moderate amount of serous fluid necessitates the compression of part of the lung on the affected side, with a retraction of the lung as well. By this compression, air cells are obliterated entirely and portions of the lungs rendered almost impervious to the entrance of air further than the bronchi and larger bronchioles. The circulation is interfered with and slowed. From what we know of the conditions favorable to the development of tubercular processes in the lung, we see that the conditions required are thus produced, and though the effusion may eventually be absorbed, the chances are, that more serious trouble of the nature referred to will have had an

opportunity to develop. Even failing this, the lung thus for a long time unable to expand will refuse to do so when the opportunity does come, and there will be a permanent coupling of the lung, and not uncommonly a visible deformity of the chest as well. The shorter the time the lung has been compressed the more readily then will it expand if the compression be removed, and the earlier the operation is performed, even though necessarily repeated, the greater chance will there be of restoration to perfect function.

I would differ with Dr. Schley in his statement that the operative procedure will speedily restore our patient to perfect health. It is too sweeping a generalization. Many times early removal of the fluid will do this, but in my experience cases not infrequently arise where the removal must be repeated, not once only but several times, the disease lasting over a considerable period. I agree with the practice of early operation, but am not so sanguine as to its inevitable, favorable and speedy cure. Occasional sad experience has taught me this.

The presence or absence of orthopnœa I do not consider a reliable indicator by itself for operation or delay. In many cases the accumulation has been so gradual that a considerable degree of toleration is attained, the patient being able to lie down without distress, and even to endure moderately gentle exercise without extreme dyspnœa. If orthopnœa be present, operate at once, but if it be absent, try to see if you cannot find other indications for operating, and if you cannot, operate anyway, and I believe your results will give you reasons for early operation in succeeding cases.

As to whether the operation should be that of aspiration or free incision should be determined by the character of the fluid. If serous or even sero-fibrinous, aspiration would be indicated. But if purulent, particularly in children, the recovery of a number of cases after free incision has been performed, the immediate improvement consequent upon the complete removal of the pus, an impossibility where aspiration is resorted to, and the ease with which further accumulation is prevented by the establishment of free drainage, all speak loudly in favor of this method, and in these cases it would seem to be almost certainly indicated.

A. A. Whipple, M.D.: I want to agree in the main with all that has been said in the first paper and in the discussion. I would like to state a case that happened to me three or four years ago which I left in other care during a brief absence. When I returned I found the boy just ready to die. He was fourteen years of age. The father and three or four brothers or sisters died of consumption and some two or three of his uncles and aunts. He had hectic fever, high temperature, and all the symptoms pointing to empyema. Without any hesitation I made a free incision between the fifth and sixth ribs, removed three quarts of offensive matter, put in a drain-

age-tube and syringed as thoroughly as possible, and followed that up for a few days, morning and evening. The temperature came down considerably, but the case not being satisfactory I put him under chloroform and made another incision between the eighth and ninth rib, put in another drainage-tube, and followed that with free syringing, using peroxide of hydrogen. I used it frequently, throwing it in at the upper tube and letting it run out of the lower. He made a good recovery, and in a not very long time. But the fact was it ought to have been operated earlier. It was on account of my absence from home that this was not done. In several instances I have operated early and have always found it best.

W. H. Burt, M.D.: It seems applicable, while on this subject, that I should show you a new instrument that I have just devised for examinations of the lungs. Heretofore our instruments have been made principally of rubber, and rubber is a very poor conductor of sound. I have devised an instrument made wholly of metal, and with the use of the ball and socket joint we get every motion we want, and I am pleased to state that it carries the sound ten-fold better than any other device up to date. I simply want to exhibit it to the members of the Society at this time. The paper that has been read here I can heartily endorse.

E. R. Eggleston, M.D.: It seems, ladies and gentlemen, that I am to take up the unpopular side of this question. Is pleurisy to be treated by surgical means exclusively?

That is the question I would like to have answered. So far neither in the papers nor in the discussions has a single word been said about the Homœopathic remedy. I claim this: that under the proper use of the proper remedy administered at the proper time and place and under the proper conditions the trocar becomes obsolete. So much for that.

Now, I take exceptions to the philosophy of the paper. Let us see. An inflammation has been set up in the cavity. Nature, for the express purpose of keeping the surfaces of that cavity apart, has filled it more or less completely with fluid. These gentlemen propose to withdraw that fluid and hinder the operations of nature, let those surfaces come together and become adherent. That is why we get so many cases of fibroid phthisis in the hospitals and so few of them in private practice.

Do they do it in fractures? Isn't the process precisely the same under different conditions? Here is a broken bone, and what does nature do? Throws out a provisional callus to protect the fractured ends of the bone. In pleurisy, nature throws out a provisional fluid to keep the surfaces apart. The cases are precisely analogous. Do they open the location of the fractured bone and take out this bony deposit? Why, no; they encourage it. What does nature do with the excess? Absorbs it, just exactly as it does in pleurisy. Nature takes care of its own deposits.

The only experience given us, so far as I heard, was that of the Old School. Is there any other? I have my own experience, and I have heard the experience of many others. Now what is it? That at the onset of this inflammatory action, just as in the onset of every other inflammatory action, there is irritation, hyperæmia, exudation always. Well, now what are the remedies that control all these processes? First, Aconite. Aconite controls the irritative stage on a philosophical and physiological basis. As soon as the irritative stage has passed, Bryonia controls the exudation stage on philosophical and physiological grounds, and it will do it, other things being equal, every time.

J. Montfort Schley, M.D.: I think Dr. Eggleston's remarks are such as no one will take exception to. He has stated his case very well, but we had nothing to do with the medical side of the case at all. I have seen, within the last sixteen months, nearly fifty cases of pleurisy with effusion. Perhaps I have been peculiarly fortunate. In most of them I was in consultation, and for the doctor's special benefit I wish to emphasize his points. I am just as good a Homœopath as he is. For his especial benefit I will say that every one of these cases I operated upon had been attended by the best Homœopathic physicians in New York and vicinity. They had received Aconite, they had received Bryonia and everything else—opiates and Iodine—and that is all the good that it did them.

Now, there are two sides to these things and to these cases. If they had come from the Old School, I would put them in their proper place; but not one of them had been treated by an Allopathist, because I don't consult with them if I can help it. Some of them were treated by men whom you have applauded on this platform—men who have come from New York, and who cannot be beaten as far as a Homœopathic prescription is concerned.

I repeat, I believe in a large majority of cases that the Homœopathic remedies have a wonderful and decided influence upon pleuritic effusions, but sometimes they seem to utterly fail. Whether it is a predisposition of the patient, whether it is a peculiar condition of the atmosphere, or whether it is the peculiar stage of the virulent inflammation that takes place, I am unable to say.

When the doctor comes to talk about fibroid phthisis, I want to remind him that ours were cases that never had been operated on for fibroid phthisis. If the doctor had seen the post-mortems that I have had in the Vienna hospital, he would know that the majority had never seen a physician. With the pleura as thick as that (indicating), and the trouble entirely on one side of the lung, it seems to me that it is plain that the trouble has arisen from pleuritis, and not from a tuberculosed condition. I wrote this paper mainly not because I am afraid to go to the Old School—for we have got plenty of good Homœopathic physicians in New York who have

a great deal of experience—but it is the dread and disgust that a Homœopathic physician, and particularly a good Homœopathic physician, has against surgery. He prescribes nothing else but Homœopathic remedies, and he hates to have his patient put under the knife, and will fight it off until the last minute. That thing is done, in my opinion and experience, repeatedly. He thinks that his remedies will relieve these conditions; but how can they do it when you have the lungs squeezed down to the size of your fist and an enormous pleural mass there, and the pleura so thick it cannot absorb anything at all?

Another thing is, follow up these cases, and see whether they develop fibroid phthisis after an early operation. I have had a good many under my care when I had the privilege of being their family physician, and have followed them for years, and you can scarcely detect a trace of adhesion of the pleura, and the scar has nearly all disappeared. In my experience, it is these very cases (whether it be a thickened pleura or a serous effusion) where we are more likely to get fibroid phthisis and curvature of the spine—the cases where nature cannot help herself nor do herself justice as she usually does.

PROPHYLAXIS OF CHOLERA.

By B. N. Banerjee, Calcutta, India.

The preventive treatment of diseases is of supreme importance not only to the physicians but to the whole world. We all know the great boon which Jenner's discovery of vaccination has conferred on the world at large. Vaccination, properly speaking, is a true Homœo-prophylaxis. The ill effects of vaccination are solely due to its abuse. Prophylactic treatment of small-pox was long in vogue in India, and the system is known as inoculation. That inoculation is a surer prophylaxis than vaccination is beyond all doubt and cavil. There is, however, one recommendation for vaccination, and that is its safety. This is neither the time nor the place to weigh the relative advantages and disadvantages of inoculation and vaccination, though it is a fact established beyond doubt that inoculation, although certain in its action, is dangerous in application, and had therefore to give way to the less dangerous method of vaccination.

Seven years ago Dr. Ferran, of Spain, extensively tried his new method of inoculation of "cholera virus." It is not yet known to the profession what "cholera virus" is, and what was his method of inoculation. When, in 1885, cholera was devastating Southern Europe—more specially France, Spain, and Italy—Dr. Ferran astounded the world by his extravagant and bold assertion that of sixteen hundred inoculations there occurred not a single case of cholera. Physicians from neighboring countries at once repaired to Spain to see for themselves the astounding result of "Ferranization," as well as to learn the method of Ferran's inoculations.

The Madrid Academy of Medicine, on investigation, found "Ferranization" useless, and publicly declared it to be so. German and French physicians returned to their respective countries well satisfied that "Ferranization" was nothing but a snare and delusion.

Now comes the question, whether it is even possible to prevent cholera by inoculation? This question cannot, indeed, be answered satisfactorily in the present state of our knowledge. The specific

"cholera virus" has not yet been discovered and demonstrated. I assert this in spite of Dr. Koch's so-called discovery of comma-shaped "cholera bacillus" as the true "cholera virus." Dr. Koch's comma-shaped bacillus has been found and demonstrated long ago in aphthous sore mouth and in persons suffering from dysentery by Drs. Lewis and Cunnigham. Drs. Klein and Heneage Gibbs also proved the inocuousness of Koch's comma-shaped bacillus by drinking a whole lot of these bacilli, cultivated according to Koch's method, with impunity. Nor could Klein and Heneage Gibbs produce cholera in pigs and other animals by injecting the cultivated bacilli. Though Klein escaped from an attack of cholera by swallowing these bacilli, I must admit that this cannot be an argument against the non-specificity of these bacilli, for we all know that every one exposed to small-pox contagion does not catch the infection even when not protected by vaccination. To get an attack of cholera or small-pox or any other infectious disease, it requires a peculiar state of the system; or, in other words, specific virus of infectious diseases is capable of infecting a person when it gets, as it were, a suitable nidus for propagation.

Very lately Pettenkofer largely experimented with the specific cholera bacilli. In all cases he failed to produce cholera in those with whom he experimented. He at last, on several different occasions, experimented on himself. Once or twice diarrhœic stools were produced only. But on all occasions the stools were found swarming with the so-called specific bacilli of cholera. Pettenkofer thus satisfactorily proved that these bacilli were not either the remote or proximate cause of cholera.

Prevention of cholera by inoculation, therefore, must be ineffectual so long as we are unable to discover and isolate beyond doubt the specific virus of cholera. Besides, if cholera could be avoided by inoculation of cholera virus, I would call this method Iso-prophylaxis, and not Homœo-prophylaxis.

Vaccination is a true Homœo-prophylaxis. It is efficacious in preventing spread of small-pox amongst those who are protected by its inoculation. Dr. Burnett admits this, but he at the same time raises questions which are, to my mind, very pertinent.

He says that vaccination has been able to protect some, but it has not been able either to decrease the mortality and morbidity of those who are attacked with the pox. It has, on the other hand, increased

the morbidity, *i.e.*, proneness to get diseases. Dr. Burnett's statements require further verification.

If Homœo-prophylaxis by inoculation increases the morbidity of the system, it would then be useless to adopt it. It has, however, been abundantly proved that Iso-prophylaxis, such as inoculation of small-pox and hydrophobic virus, has proved dangerous to human life. The celebrated French savant, M. Pasteur, has been trying, with the countenance of the medical profession of the world, inoculation of hydrophobic virus in cases of hydrophobia, with doubtful results well known to you all.

It is my belief, based on the successful preventive treatment of small-pox by vaccination, that Homœo-prophylaxis is a safe as well as successful method of treatment.

The question which now crops up is whether Homœo-prophylaxis is possible and practicable by administering Homœopathic medicines? Our great master, Hahnemann, himself suggested two such medicines prepared according to his own method. These two medicines were Cuprum metallicum and Veratrum album. Drs. Quin, Dudgeon, Josttein, Humphreys and others believe in the efficacy of these two medicinal substances as prophylactics of cholera; whereas Drs. Hempel and Rutherford Russel deny their efficacy.

Hahnemann's directions for the use of Cuprum was to take a small globule of the 30th potency of Cuprum or Veratrum once a week during an epidemic. The medicinal action should not be disturbed by dietetic irregularities and smell of Camphor. He also urged moderate diet and cleanliness.

Dr. Quin's experience showed that these two substances preserved a good many persons from attacks of cholera. Dr. Humphreys says, "It is the general experience of Homœopathic physicians that among those who took the medicines (Cuprum and Veratrum), and were attacked with the disease, it showed itself in its mildest form, while those who had omitted this preventive treatment were attacked with great violence.

Dr. Constantine Hering says that "the surest preventive against cholera is Sulphur. Put half a teaspoonful of flowers of Sulphur into each of your stockings, and go about your business. Never go out with an empty stomach; eat no fresh bread nor sour food. This is not only a preventive in cholera, but also in many other diseases. Not one of the many thousands who have followed this, my advice, has been attacked by cholera."

Dr. Dudgeon says: "It would be wrong to neglect the means which the genius of Hahnemann and the labors of his disciples have put within our reach, when the means are so simple and efficacious, whilst the cure is so difficult and hazardous."

Some physicians of the Orthodox School recommend an ounce of brandy two or three times a day after meals, as a preventive against cholera. Others of the same school urge the use of dilute sulphuric acid, ten to fifteen drops every day in empty stomach, as the surest preventive of cholera.

I have thus quoted many highest authorities in our school about the prophylaxis of cholera. All those whom I have quoted are only partially right. I have put Cuprum, Veratrum, Sulphur, Camphor, etc., to the crucible of practical test, with results neither positive nor negative.

As India is the home of cholera, so I have had immense opportunities to try these prophylactics repeatedly. I had sometimes success, other times failures. At last I found that of all physicians Dr. Dudgeon struck the right key-note regarding the use of these prophylactics. He truly says "that prophylactics that were useful in the previous epidemics might not prove equally useful in the next. Consequently we can determine upon a prophylactic only when we know the actual character of the epidemic, the same rule guiding us in the selection of a preventive as in the choice of a remedy, viz., a comparison of the symptoms of the disease, with the physiological effects of the remedies."

This is the right explanation of failures and successes of prophylactics. We must study the *genus epidemicus* before we can hit upon a prophylactic. All cholera epidemics are not of the same character, neither do all cholera cases present similar symptoms. As there cannot be any specific medicine for any disease, so there can never be any one single prophylactic medicine for any disease. Many physicians, therefore, are mistaken in their notions about specific medicines, both curative and preventive, for diseases. Every one of us should bear in mind the sage advice of Dudgeon in the selection of prophylactics of cholera. I have had very satisfactory results since following Dudgeon's advice. Those who have had experience of several cholera epidemics must have noticed that the type and character of all the epidemics are not the same throughout their course. My object in noticing this fact is, that with the change of type and

character of the prevailing epidemic we must as well change our prophylactic medicines.

The subject of prophylaxis is one of considerable moment both to physicians and the public, though it has not been hitherto worked out properly.

Dudgeon remarks "if we can by means of the Homœopathic principle discover preventives for such diseases as scarlatina and cholera morbus, the discovery of medicinal preventives for other diseases of an equally fixed character seems to be feasible. As yet I cannot say that such preventives have been discovered, for it is by no means supported by evidence." . . . . "That we shall ultimately succeed in discovering more prophylactics for fixed diseases I do not doubt. In the meantime it can be said that we have advanced in this direction beyond the point Hahnemann brought us to." Now, it cannot be gainsaid what Dudgeon asserts.

Is it not, therefore, our imperative duty to study the epidemics of cholera more carefully, more scientifically and more patiently with the view of combating it more successfully? "Prevention is better than cure" is better applicable in this dire disease. As physicians trained in the school of Hahnemann, unfettered by any dogmas, and not bound down by any orthodox line of treatment, I think it should be our primary duty to study the Homœo-prophylaxis of diseases, and more specially of cholera, which every now and again causes so much havoc, alarm and mischief.

To sum up:

1. Homœo-prophylaxis is possible, as it has been proved abundantly in many cases.

2. Before selecting any prophylactic medicines, we should study the *genus epidemicus*.

3. As the type and character of the same epidemic vary with its progress, so we shall not rest content with the same prophylactic medicine throughout its course, but change it with the change of the character and type of the epidemic.

4. The action of prophylactic medicines should not be disturbed by irregularity of diet, smell of Camphor and insanitary surroundings.

5. For the success of the prophylactic treatment, observance of general hygienic rules are absolutely necessary.

6. The prophylactic medicines should be administered in as small a dose as possible, and should be repeated at longer intervals.

CHOLERA.—ITS CURATIVE TREATMENT.

By P. C. Majumdar, M.D., Calcutta, India.

For convenience of describing the medicine in the treatment of cholera it is usual with authors to divide the disease into various stages. It is not exactly true that these stages appear one after the other in regular succession as described in the books. On the contrary, we often find one stage merging into the preceding or succeeding stage. We cannot always expect to see the disease phenomena occur in regular successive order.

However, all writers on cholera agree in recognizing four stages of the disease: first, the premonitory stage, or, as it is sometimes called, an incubation; second, the stage of evacuation, or full development; third, collapse; and fourth, the stage of reaction. We shall describe the treatment in this successive order, reserving complications and sequelæ of the disease till the end.

The number of remedies in actual cholera is not very large. Hahnemann was the first to suggest Camphor, Veratrum and Cuprum, and this suggestion is so simple that there is no difficulty in treating the disease effectually.

In the premonitory stage we are not in a position to say that these symptoms would lead to such a serious disease as cholera, and so no particular medicine is prescribed or a physician's help deemed necessary. If there is some diarrhœa, it can be easily checked by the timely administration of a few doses of Camphor or Phosphoric acid or Podophyllum. If the patient is complaining of malaise, pains in body and chilliness, we can give Aconite, and if there be no appetite and the bowels are irregular, regulation of diet and rest are all that is necessary. When purging and vomiting of "rice-water" takes place, or, in other words, when the second stage is fully established, no time should be lost in selecting and administering one of the following remedies, according to the state and symptomatic indications of the case.

Veratrum alb. { Camphor. / Cuprum met. or acet. / Ricinus. / Jatropha. / Euphorbia. / Croton tig. / Antim. tart. / Elaterium. }

Veratrum album may be considered as the type of a class of remedies which are more or less potent in checking undue evacuations and bringing them to a natural color and consistency. In fact, by their timely administration, any further mischief may be averted. In such cases one of these medicines should be selected in accordance with the symptomatic manifestations of the case.

Veratrum album.—We are familiar with the fact that white Hellebore is a drastic purgative; so, according to the laws of Homœopathy, it is a medicine *par excellence* for choleraic evacuations, both purging and vomiting. From our repeated personal experience we can give Veratrum the highest place in the developed stage of cholera. Our late lamented Professor Farrington says, "Veratrum seems to act prominently on the abdominal organs, acting probably through the splanchnic nerves. When these nerves are paralyzed, the blood-vessels become overcharged with blood and pour forth their serum. The prostration, the coldness and the terrible sinking sensation that belong to Veratrum, all start from these nerves."

Indications for Administering Veratrum.—Vomiting and purging of a large quantity of serous fluid—rice-water evacuations, as they are called; colicky pains through the abdomen, with cramps in the extremities, especially the calves of the legs; great prostration; cold sweats, especially on the forehead; coldness and blueness of face and hands; great thirst for large quantities of cold water and for acid drinks.

In times of cholera outbreaks it is wise to give Veratrum at the first appearance of diarrhœa, so that no further and serious development would take place. In such cases Veratrum has a marvellous effect. It is true that in Veratrum poisoning the stools are not always choleric; they are sometimes tinged with bile, and there is no total suppression of urine. Whatever may be the toxicological ef-

fect of Veratrum about the evacuation, our clinical experience with this drug is very extensive. We can confidently give this medicine in all sorts of evacuation.

In cholera, general depression of strength is very great, and here Veratrum is also our sheet anchor. Hahnemann gives us the following picture of Veratrum poisoning in his *Lesser Writings:* "Two children took white Hellebore by mistake. A few minutes after taking the drug they became quite cold, fell down, their eyes projecting like those of a person in a state of suffocation, the saliva ran continually from their mouths, and they seemed devoid of consciousness. I saw them half an hour after the accident, and when I arrived both seemed at the point of death, distorted, projecting eyes, disfigured, cold countenance, relaxed muscles, closed jaws and imperceptible respiration."

As regards dose, I generally commence with the 12x, and subsequently to the 30x. Our next great anti-choleric remedy is:

Camphor.—It is generally used in the first state of diarrhœa, and also sometimes in the stage of collapse. Body is cold, voice husky, prostration very great. In times of outbreak as soon as a patient is passing diarrhœic stools, no time should be lost in administering Camphor. At this time one to five drops of the Camphor solution after each stool is all that is required, and we are almost sure of checking the further progress of the disease. Hahnemann says: "In the first stage Camphor gives rapid relief, but the patient's friends must themselves employ it, as this stage soon ends in either death or in the second stage, which is more difficult to be cured, and not with Camphor. In the first stage accordingly the patient must get as often as possible (at least every five minutes) a drop of the spirit of Camphor (made with one ounce of Camphor to twelve of alcohol) on a lump of sugar or in a spoonful of water."

"The quicker all this is done at the first onset of the first stage of the disease, the more rapidly and certainly will the patient recover; often in a couple of hours, warmth, strength, consciousness, rest and sleep return, and he is saved."

What Hahnemann said above I had several opportunities of witnessing in my own practice. In my younger days, when I was consulted in the beginning of an attack, I was almost invariably successful with Camphor alone, but later on I had scarcely a case when I had the opportunity of administering Camphor with suc-

cess. Dr. Rubini, of Naples, was immensely successful with his preparation of Camphor (equal parts of Camphor and Alcohol), and I believe he treated his cases from the beginning with Camphor.

Cuprum.—This medicine may be used in all stages of cholera; especially it is very efficacious in the developed state of the disease. It has the power of checking purging and vomiting, and is pre-eminently useful in cutting short the distressing and painful cramps in various parts of the body. Hahnemann placed great reliance in this medicine. He sometimes advised us to give it in alternation with Veratrum. Our late lamented Dr. B. L. Bhaduri, who had treated more cases of cholera than anybody in India, used to say that he could treat nearly all his cases with Cuprum alone. He was very fond of Cuprum ars. in the stage of collapse with purging, vomiting and cramps. Drs. Drysdale and Russel spoke highly of it and so did Mr. Proctor. This latter gentleman treated ninety-eight cases of fully-developed cholera with this drug, and was satisfied with it. He writes: "For the cramps it is unquestionably the best remedy, and I must say for the vomiting also. In the stage of collapse I gradually found myself trusting to Cuprum, and the impression is very strong in my mind that in collapse it is the most valuable of our remedies."

Indications for Cuprum.—Purging and vomiting up rice-water fluid; colic of a paroxysmal nature; constant restlessness; cramps in the extremities, beginning in fingers and toes; great exhaustion; icy coldness of hands and feet; quick, rattling and short breathing; almost imperceptible, weak and thready pulse; pale and sunken features; great thirst, water runs down with a gurgling noise; relief of vomiting after drinking; scanty or entirely suppressed urine.

I prefer the higher dilutions, from 12th and upwards. I have seen aggravation from the use of lower dilutions in several cases.

Cuprum Arsen.—This combination of copper and arsenic is very efficacious in cholera. Dr. Hale first draws our attention to its use in cholera cases. He says, in his *New Remedies*, "I first used it in some severe cases of cholera in the years 1867 and 1876. These cases were marked by the usual intestinal disorder, to which were added severe and painful cramps in the abdomen and extremities. The alternation of Arsenic and Cuprum did not prove as satisfactory as I expected, but the use of Cuprum ars. in sixth trituration in water for children, and dry on the tongue in adults, generally

acted promptly. I can recommend it in cholera infantum, spasmodic and neuralgic pains in the bowels, accompanied by screams, and cramps in the fingers and toes, attended with great debility and threatened collapse."

I can bear testimony to its efficacy in many serious cases of cholera.

Allied to Veratrum and Camphor are quite a large number of medicines more or less applicable to cholera evacuations, and these are Ricinus, Jatropha, Croton tig., Euphorbia and Elaterium. Among these we had a very satisfactory result from Ricinus in the epidemic of 1883. It is useful in cases of diarrhœic cholera. We have numbers of cures reported in the *India Homœopathic Review* of that year. I used it in diarrhœic cases where the disease took its origin from indigestion or simple diarrhœa. In a big family in Calcutta there was an outbreak of cholera, and three persons died of it, though Homœopathic treatment was had recourse to from the beginning. I was called when a fourth case appeared, and I at once hit upon Ricinus, which had a marvellous effect in restoring the patient to health. In this very house I had to treat four more cases, and all of them were saved by the timely administration of Ricinus. In this house there was a medical student, who asked me the name of the medicine, and learned that it was Ricinus. He remarked that in all previous cases which died Veratrum, Camphor and other medicines were given. Ricinus surely is a new medicine. He gave the credit to Dr. George Johnson, who promulgated the Castor oil treatment of cholera.

Indications for Ricinus.—Purging and vomiting of rice-water fluid; cramps in the extremities; there was scarcely any pain in abdomen; extreme prostration; complete suppression of urine; pulse almost imperceptible; slight coldness of the hands and feet.

In Ricinus cases there is a gradual sinking of the vital power; in Veratrum and Camphor it takes place rather rapidly. The stools may be sometimes tinged with bile. If the disease takes its origin from transgression in food, Ricinus is so much more indicated. I am in the habit of using the 6x dilution, repeated after each stool.

Jatropha is sometimes efficacious. It produces depression of the heart; vomiting is more prominent than purging.

Jatropha.—Whitish vomiting, copious and like white of egg;

stools in gushes, gurgling and rumbling in the bowels; cramps in the extremities; pains and burning in stomach; coldness of body; slight perspiration and thready pulse; "watery diarrhœa, as if spurted from him." The very alarming symptoms are not marked in Jatropha, and the patient is devoid of any anxiety for his future, but is rather lively and cares nothing for his suffering and disease.

Euphorbia is another medicine closely allied to Jatropha. In fact, it is a remedy for simple choleric diarrhœa and not for cholera proper. Both Jatropha and Euphorbia I use in the 6x dilution after each stool.

Croton tig. is also a medicine for diarrhœa, but it often cuts short the disease, which may be developed into actual cholera. Stools are yellow, watery, passed forcibly like shot, worse after food and drink; there is deadly nausea; vomiting after drinking; great prostration of strength. For suppressed eczema, Croton is a good remedy; dilutions from 6x to 30 used.

Very closely related to Veratrum is Antimonium tart. Its indications are very much like those of Veratrum alb. Practically, when I find Veratrum fails I resort to Ant. tart. Purging of rice-water stools; vomiting with great effort; cold and clammy perspiration; drowsiness, with complete exhaustion; pulse almost imperceptible or nearly so; heart's action failing; respiration labored and difficult. When there is an epidemic of small-pox prevailing, it is better to give Ant. tart. in the beginning of an attack of cholera, as it is alike efficacious in both diseases. We have seen it act beautifully.

These are the principal remedies in developed stages of cholera. They are more or less efficacious in checking the cholera evacuations, and thus bringing the case to safe and sound grounds.

In what is called English cholera, or cholera morbus, I found Iris versicolor a useful remedy. When vomiting is predominant and distressing, with acid rising, burning throughout the alimentary canal from mouth to anus, I frequently had to resort to it. In the case of a young gentleman in a suburban town of Calcutta, I got a charming effect from Iris. The attending physician there tried all cholera medicines to check purging and vomiting of bilious and acid matters, with burning in stomach, without any effect for two days. I gave him Iris vers. 6x, and in a couple of hours he was almost cured.

Now, if the evacuations are not stopped, or cease after a considerable damage to the constitution of our patient, the case goes on to the next stage. I mean the collapse stage. In this stage the patient is on the very verge of death. But, as Homœopaths, we must not lose heart even in this stage. The following medicines are to be thought of now:

Arsenicum alb. {
- Aconite.
- Camphor.
- Carbo. veg.
- Cuprum acet. and Ars.
- Hydrocyanic acid and Cyanides.
- Colera (Naja).
- Secale cor.
- Veratrum alb.
- Antim. tart.

Practically, a great deal of difficulty would arise in treating this stage of the disease. We have a great many medicines so closely analogous in their symptomatic indications that it is very hard to say which is most appropriate. However, if we can examine our patients more minutely, we can come to a definite selection.

Arsenicum album is the most important medicine in the collapse stage of cholera. Its pathogenetic symptoms are so much like cholera symptoms that an arsenical poisoning case may be mistaken for a genuine cholera case. It has a vast range of action, and we have repeatedly verified its curative virtues in most serious cases of cholera. It is for this reason that I select it as a prototype of collapse remedies. Its symptoms are very marked and unmistakable. Great irritability, associated with profound exhaustion, is the prominent characteristic of Arsenic. You will see patients whose pulse is no longer perceptible; great weakness; even unable to utter a single word; yet so restless, irritable, and anxious that you will be surprised.

Indications for Arsenic: great anxiety and restlessness; fear of death; utter prostration of strength; sunken eyes; distorted face; pointed nose; cold and clammy perspiration over the whole body; burning of the whole body; unquenchable thirst and vomiting after drinking; drinks often but little at a time; violent burning of the stomach and abdomen; urine completely suppressed.

When cholera attacks come on after eating much unripe fruits, drinking much ice water, living in a damp place and exposed to a putrefactive and offensive smell of decaying animal and vegetable substances, Arsenic should be selected at once.

Lower dilutions of the medicine are not so efficacious as the higher. I generally give 30th decimal in frequently repeated doses until favorable symptoms are observed. I have many a time saved desperate cases of cholera by giving the 200th dilution when lower and 30th had failed.

Arsenic has been administered indiscriminately without reference to its indications. This is a bad practice and harmful. It is for this reason Dr. Bell says "that Arsenic does more harm than good in the hands of ignorant persons."

Camphor has been used in cases of collapse, but I have not used it very frequently. It may be given in following indications: Diarrhœa and vomiting; sudden prostration; coldness of the surface; cold sweat: bluish countenance; husky voice and violent cramps. It should be cautiously given and as soon as improvement is perceptible and warmth returns it must be stopped.

Aconite is pre-eminently one of the best remedies in the collapse stage of Cholera. Dr. Richard Hughes remarked that in our day Aconite will be a valuable medicine for cholera. This was written long ago and I think that day is come and Aconite is used extensively and with good results.

Indications.—Great anxiety and fear of death: icy coldness of the whole body; cold perspiration; great thirst; labored respiration with pains and oppression of chest; pulse quick, thready and scarcely perceptible; heart's action weak and slow. In cases of violent cramps and pains in abdomen it is one of my great helps. An elderly lady had an attack of cholera a few years ago with collapse and unbearable pains in the epigastric region. Many Homœopathic remedies had been tried without effect. I found her in great agony and gave her Aconite 1x every half hour and after two days she was relieved of her pains and reaction took place. For cholera in warm days and cool nights and after exposure to cold I find Aconite valuable.

Carbo Veg. is another of our important collapse remedies. I used it in many cases of impending death and with good results. When reactive power is gone it is indicated. Indications: patient lies as if

dead; there is not the slightest sign of irritability about him; pulselessness; cold and clammy sweat; leaden hue of the body; husky voice; difficult and labored respiration; no thirst; no purging and vomiting; abdomen often distended; urine quite suppressed. Lower dilutions have no effect. I generally use it in the 30th and upwards.

Hydrocyanic acid is a marvellous medicine when indicated, acting promptly and often snatching away patients from the very verge of death. On one occasion, I had to attend a little girl gasping for the last breath and no power of swallowing medicines or anything. I poured a few drops of Hydrocyanic acid 3x on a clean handkerchief and held it to her nostrils and to my utter surprise I found her breathing quietly in a few minutes, and she made an ultimate recovery. It is for this reason that our esteemed colleague Dr. Mohendra Lal Sircar speaks of it in these terms: "If any remedy is entitled to be spoken of as a charm it is Hydrocyanic acid. It would seem at times to restore animation to a corpse." Indications: icy coldness of body with pulselessness; cadaverous expression; breathing slow, deep and somewhat spasmodic in character; beating of the heart slow; urine and stool generally suppressed. I generally give it in the 3x or 6x dilution every half hour or more frequently.

Colera or Naja-Tripudians.—This is a medicine from a venomous snake of India. The effect of this poison is very swift, like the rapidly destructive nature of cholera. Our learned Dr. Salzer speaks of it and Lachesis in the following words: "We administer them when respiration quickens, becoming at the same time more and more superficial, while the heart's action is normal and still comparatively vigorous. This sort of respiration is a sure sign of impending paralysis of the respiratory centre and coincides so far, exactly with what occurs under the venomous influence of snake poison." I use it in the 6th centesimal dilution every hour or so.

Secale cor.—Another important remedy in collapse and some other stages of cholera is Secale.

Indications.—Watery, slimy and offensive stools, vomiting of water and mucus; eyes sunken; violent cramps of the calves, hands and chest; great restlessness and thirst; difficulty of breathing, pulselessness or small, slow and almost imperceptible pulse; coldness of the body, but patient feels very hot and cannot keep clothes on. I have very little confidence in Secale in the stage of collapse, but in other respects it is a very useful remedy. I am often able to

relieve distressing cramps when Cuprum fails. I find it especially beneficial in that dreadful symptom—the cramps and pains in the side of the chest and more in spasm of the heart. Appearance of menstrual flow during an invasion of cholera is a very serious matter, and in this I find Secale an admirable remedy. Typhoid conditions during and after cholera attacks are also very serious, and here Secale is powerful. Feverish heat after coldness; sleepiness with now and then restlessness or profound comatose sleep; pinched appearance; frequent and small pulse. It may be used in gangrene, bed sores, ulceration of cornea, and some other symptoms derived from low vitality of the system after an attack of cholera.

Verat. alb. is also useful in collapse state. Dr. Salzer writes as follows: "I can hardly believe that Veratrum should not be as useful in collapse, owing to a paralytic condition of heart. Perhaps we give the remedy at too long intervals. Dr. C. Dunham recommends it to be given, like Camphor, every five minutes. Much of the bad reputation of the drug in collapse may also be owing to its not having always been administered at the right place and according to right indications."

Ant. tart. being a depressant remedy on the heart is recommended in cholera collapse, and I often find it useful.

Another remedy is *Nicotine*, the active principle of tobacco. My experience is very limited about this medicine. It may be administered in collapse with cold sweat, deadly nausea and sleepiness. I give it in delirium with comatose condition.

Sequelæ and Complications.

With the reaction stage our trouble does not end. Various other ailments await our poor patient, and we must be on our guard to combat them in time. These are as serious as an advanced stage of cholera proper. Many a time we lose our patients in this stage.

Uræmia.—If urine is not voided after reaction fully sets in, we must do something for it. Some physicians are in a hurry about urinary secretion, and they get so very impatient, as to wish it even in collapse stage. That is bad. When reaction is full we must stop all medicine and wait, and if healthy signs are not present, urine not voided, and fear of typhoid state supervening, then we must stir up. Many a time the previously administered drugs are sufficient to restore urinary secretion; so without abandoning them

or searching after new medicines we must continue them according to symptoms. Arsenic, Hydrocyanic acid, Tabacum and Nicotine are to be used with proper indications. But if they fail, and if there is impending congestion of the urinary organs, and subsequently of brain, we may resort to *Belladonna.* The use of it in the 30th dilution often gives prompt relief. *Opium* may be considered as one of the best remedies in this condition if there is a comatose state with uræmia. We have seen *Agaricus musc.* or *Muscarin* useful in such condition associated with pulselessness or small and thready pulse, coldness of the surface, comatose state and delirium.

If urine is collected in the bladder and there is sufficient expulsive effort but no urine voided, *Cantharis* 6x or 30 may be used with benefit. Failing this, and if there be some burning in the urethra, *Terebinthina* may be given.

I sometimes use Acidum carbolic 6x or 12x in cases of uræmic intoxication and delirium in cholera, with the following indications: Constantly agitated, uttering a piercing cry, delirious starting from sleep; tongue dry, coated with thick, yellow fur, great thirst; high fever; urine is dark, black or blackish olive-green color. Our much-vaunted *Kali bich.* is not a good medicine in suppression of urine in my hands.

Fever.—In the reaction stage we often meet with feverishness, and when slight we must not give any medicine; but when it assumes graver form, and there is restlessness, thirst, dry, parched tongue, and full pulse, I generally give *Aconite,* failing which, Veratrum alb. may be used. If there is headache, flushed face and other symptoms, Belladonna high has its place. Rhus tox., Bryonia and Phosph. acid may be administered with proper symptomatic indications. These latter three medicines may be thought of when this reactionary fever assumes a typhoid form.

Hiccough is often a very distressing and obstinate complication. Our ordinary hiccough remedies cannot find their place here. Cuprum met. and Arsen. are very frequent helps. Veratrum alb., Nicotine and Hydrocyanic acid are recommended.

In the reaction stage there may be some faulty condition of the digestive tract generally, and we may think of Nux vomica, Cicuta, Phosphor., Ignatia, Belladonna and the like. We have seen patients cured, to all intents and purposes, when they were suddenly attacked with dyspnœa and died. Dr. Macnamara is of opinion

that in these cases there is formation of clots in the right side of the heart, usually extending into the pulmonary arteries. Dr. Salzer, on the authority of Dr. Buchner, advised us to give Calc. ars. 6x or 12x, but death is so sudden that nothing can be done.

After the choleraic symptoms are over we sometimes get cases of *obstinate diarrhœa.* In these cases, when the stools are yellow and watery, quite copious and sudden, a few doses of Croton tig. are sufficient. When stools are saffron-yellow, watery, with severe colic, Colchicum is to be thought of.

When the stools are white or yellowish-white, painless and much prostration, Phosph. acid or Podophyllum is given. If there is tympanitic distension of the abdomen, passage of flatus, rumbling, and thin yellow stools, Natrum sulph. or China may be given. One or two doses of Sulphur, higher dilution, is sufficient to bring the stool into its natural color and consistency. When there is a tendency towards dysentery, stools are greenish, with tenesmus and colic, Merc. viv. is the remedy; but when they are bloody and slimy, Merc. cor. is the preparation used.

Vomiting is often persistent and troublesome, and defies all our well-selected remedies. In such cases some bland and mucilaginous food is all that can check it. I generally give some arrowroot or rice-water salted and acidulated. Our chief remedies in vomiting are Arsenic, Ipecac, Iris vers., Phosphorus, Kreasote, etc. Other complications may be treated as general diseases.

Diet.—There is a great diversity of opinion among medical men on this subject. From broth, brandy and other nourishments to no food is the prevailing idea on this subject. From practical observations in many cases, we are of opinion that during the progressive and collapse stages of cholera no food should be given except plenty of water and ice to appease thirst and cool down the stomach. After the tempest is over, bile appears with the evacuation; and, urinary secretion established, barley- or arrowroot-water, with thin fish or meat broth, may be allowed. When there is craving for food, gradual addition of nutritious but easily digestible food should be given. The stomach becomes very sensitive after an attack of cholera, so that particular care is necessary in giving food and nourishment.

Discussion.

W. J. Hawkes, M.D.: I have been very much pleased to listen to this very excellent paper on this very important subject. I believe firmly in the old adage that an ounce of prevention is worth a pound of cure, so that the hygienic and medicinal prophylaxis of cholera is of extreme importance; that the hygienic prophylaxis is of much greater importance than the therapeutic prophylaxis, for the reason that the individual can take care of himself with the prophylaxis of hygiene, while he cannot take care of himself with the prophylaxis of therapeutics. The disease is rapid, and requires prompt attention when therapeutics are required. Consequently, I would put great stress upon the hygienic prophylaxis of cholera. I think the prophylaxis of cholera may be summed up in three cardinal points: cleanliness, temperance, and a thorough cooking of everything that is taken into the stomach. The more recently it is cooked before being taken into the stomach the better. The prophylactic remedy acts decidedly in preventing disease, just as the therapeutic remedy acts in curing the sick, in this, that its action is to bring the individual health up to par as soon as possible.

In regard to the remedies prescribed or described here by our foreign friend, the indications are remarkably well given. As far as experience goes, I have had none with cholera, but the indications given are remarkably applicable.

J. H. Henry, M.D.: I am very much pleased with the paper of our friend from India, who represents the treatment of cholera by Homœopathy. In 1849, when the cholera visited the United States, I was a student of medicine in New York city, and had charge of a Catholic lying-in hospital in that city. People died not only by scores but by hundreds. I was affected by the disease, but was cured by Arsenicum and Veratrum. A most remarkable thing occurred at that time. We were one night seated on a balcony discoursing about the question of cholera and its remedies. The ladies of the hospital were present. We had everything neat and clean; we had no signs of anything that would develop into cholera in the institution. Of those who were sitting on that balcony that night, every one was buried the next morning except myself.

What effect has Hydrocyanic acid upon cholera? In a practice of over forty years I have seen no effect produced by Veratrum, Cuprum, or Carb. vegetabilis upon cholera in its collapsed state. And now what are the remedies when we have this extreme collapse of the whole nervous system? Our only remedy is Aconite, and for that remedy we are indebted to Dr. Hempel. Whenever you have those violent types, you must rely upon Aconite in appreciable doses. The paper is instructive. I am very glad that it has been read.

SOME OBSERVATIONS ON NEURASTHENIA AND ITS TREATMENT.

By Conrad Wesselhoeft, M.D., Boston, Mass.

When, thirty-five years ago, the writer first made the acquaintance of what is now called neurasthenia, it was known as spinal irritation, and the best of modern researches have been unable to give a better definition beyond a functional disturbance of the spinal and cerebral nerves, dependent on a morbid process, for which "irritation" is as proper a term as any. As deaths do not occur, autopsies throw no light on the subject. Briefly stated, neurasthenia, when observed from the beginning through its chronic course, has a period of prodromal symptoms followed by a protracted acute, and succeeded by a still more protracted chronic, state, between the end of which and the beginning of convalescence there is a very vague, often indiscernible, boundary line.

The prodromal symptoms are quite indefinite and very variable, pointing to nothing in particular. Loss of appetite, irregular sleep, excitability alternating with lassitude, etc., are often overlooked, especially when the second stage—display of unusual mental and physical energy without subsequent fatigue—becomes apparent. This is often mistaken for a sign of unusually good health. When a young girl or mature woman, married or unmarried, feels that she can study ten hours a day and devote half of her night to pleasure or business; when besides much mental occupation she begins to rejoice in long walks without fatigue, that is the time when the mischief is going on without exciting timely suspicion. Relief is at last sought when the functional disorder of the nerves has gone to the opposite extreme, and becomes manifest in what is properly and popularly termed "nervous prostration," when instead of having no sense of fatigue, the least bodily or mental effort seems intolerable, in grave cases rendering the patient a helpless being, completely dependent on the unremitting assistance of others whom she (it is usually a woman) rules with the inexorable power of the *vis inertiæ*.

During this usually very protracted period of the disease convalescence usually sets in, but so imperceptibly that the physician alone can sometimes estimate its progress, which is unnoticeable to others towards whom the patient acts as she has for months or years. This is the time for action, too often delayed from motives of misplaced sympathy on the part of relatives and friends.

The affection is in many instances limited to the spine, the mind becoming only secondarily tired. In other cases it is spinal and cerebral; in others again chiefly cerebral. The line between this and insanity is always clearly definable. Though a neurasthenic patient may become insane, and probably the reverse, yet both are distinct conditions.

Books speak of this disease as common to men and women. Yet in this region in small towns as well as in large cities the cases of neurasthenia in women are preponderatingly great.

Hypochrondia and hysteria stand in peculiar relation to neurasthenia. They may be regarded as different species of the same genus; that is, more or less deeply seated disturbances of the cerebro-spinal system in which the sympathetic system is probably indirectly involved, as many functional disturbances presided over by the great sympathetic system often testify. Hypochondriasis, pure and simple as occurring in men, is easily distinguishable by its striking characteristic of introspection and despondency, occasioned by abnormal sensations, without marked physical weakness and tiredness. Pure hypochondriacs are often energetic, conscientious workers. In hysteria there is neither great tiredness nor tendency to introspection, but a paroxysmal or prolonged absence of the power of self control, in grave cases associated with tonic or clonic muscular spasms and loss of consciousness. While neurasthenia in its uncomplicated forms is free from these symptoms, but, as ample experience teaches, often complicated with both of the preceding forms to such an extent that it is often very difficult to tell which is primary and which secondary. The symptoms known as introspection, hysterical aberrations of the emotions, and neurasthenic sense of exhaustion are in their distinctive manifestations most important and constitute indications in the selection of remedial and dietetic measures.

The following are some observations of peculiarities observed in a large number of cases and peculiar to all:

Introspection.—The neurasthenic patient invariably expresses her desire for relief, not so much in a direct appeal as in a supplicating, subdued tone of voice and manner. She rarely asks, "What can you do to relieve me?" but almost invariably, "What is the cause of" this or that sensation? If she is introspective, that is, hypochondriacal, she becomes a nosomaniac, watching acutely every one of her numerous distressing sensations, on the unremitting analysis of which her mind dwells. In marked cases she is quite unable to think of anything outside of herself, and in many cases dislikes to do so, preferring to rivet her attention on herself. Attempts to divert her annoy or anger her. Friends and relatives implore the physician to divert the patient, but all their attempts are in vain because quite misdirected.

Positive and Negative Will.—It seems sometimes as if the patient delights in her self-inspection, and that she prefers her condition to speedy recovery. This is not the case, for the patient will always assure the physician of her wish to get well. During the acute stage—a long yet definable period—this wish and longing cannot well be utilized, but the long and ill-defined period of convalescence must first be awaited. Here we shall always discover that the *wish* and the *will* of the patient are two very different mental conditions. The desire or wish for recovery is entirely unattended by any will effort to accomplish the desired end. The injunctions and directions of the physician are resisted by the same unconquerable power of negative power, or *vis inertiæ*. The patient having been unable to exert her will, now thinks herself unable to use it.

Numerous Symptoms of Patients.—To physicians in search of indications for medicines each statement of the patient concerning a sensation is apt to be considered as a symptom. Many years ago, when resolved to get at the keynote of a patient's case, the writer determined to allow the patient to detail all her symptoms as long as she chose and to take accurate notes of each one till the right one should be disclosed; and this was to be done regardless of time and exertion. The patient, one who needed no urging to describe her "symptoms," began in an almost inaudible voice, detailing one sensation after another with an unrivalled degree of clearness and vividness of expression; as she proceeded the voice became stronger, her face slightly flushed, and the most perfect descriptive language flowed in an endless stream. Each word was written down, page

after page was filled; still she went on with unmistakable signs of satisfaction at being able to pour her pent-up emotions into willing and sympathetic ears. If, for a moment, the flow of language was interrupted, a simple question would re-animate her to proceed with renewed energy. Feelings seemed to beget feelings; their complexity gave the patient no trouble; her intellect was equal to the ocsion of unravelling the most complicated sensations, separating them into their component parts and spreading them out before the mind of the listener. A glance at the watch showed that nearly two hours had passed, during which the feeblest of neurasthenic patients had talked incessantly. The note-book was full, the keynote was found. It was this: neurasthenic patients have innumerable sensations and exhibit no signs of fatigue after talking incessantly for nearly two hours.

Great Endurance of Neurasthenics.—The instance just related, which is one of many, illustrates two things. One is, that it is not the kind of sensation described but the fact that neurasthenics have innumerable sensations, that constitute the symptoms. The other thing is that many neurasthenics are capable of great exertion without suffering disagreeable after-effects from fatigue. This is illustrated by other cases of which I have notes. A highly neurasthenic young lady consented to camp out for her health near a lake. She was induced to join a party for a short walk along the lake. By trying what they thought a shorter road the party lost their way and took a very long walk of about four hours, through bogs and over fences. The neurasthenic was less fatigued than some of the others. The interesting observation was subsequently made that the patient had become interested in a young man of the party. She recovered her health within a year from that time. Other cases of this kind will appear under the head of therapeutic suggestions.

Neurasthenic Patients Crave Sympathy.—This is one of the most formidable obstacles to the curative management of such cases, for the kind of sympathy such patients crave is expressions of condolence and more or less deep affliction at so much suffering as the patient expresses. Such sympathy is most natural and does honor to the feelings of parents, sisters, brothers and husbands, but it is unfortunate that the deeper their expressions of affliction so much the more profound will be the mental dejection and weakness of the patient. Almost every case which has come under the writer's ob-

servation has been much hampered if not made hopeless by this condition of things, against which no remedy suggests itself that would not be construed as "unkind."

The *origin* of this very formidable and refractory nervous disease, like that of most diseases usually termed chronic, is either *hereditary* or *acquired*, as the histories of every observed case plainly testify. Either the father was a hypochondriac or the mother neurasthenic, or both parents were of unsound nervous constitution. Dipsomania on the part of parents produces neurasthenia in the children, as readily as it will be followed by any other form of nervous disease, according to the individual predisposition of the offspring. The excessive use of tea and coffee is another very active factor in the history of neurasthenics. Where fathers inclined to alcohol, mothers are addicted to tea and coffee, which, while its immediate effects do not obtrude themselves upon our notice, are none the less insidious in their more remote consequences.

The acquired forms of neurasthenia are of utmost interest to the therapeutist, and the sources of acquisition are readily stated. They are much brain-work with insufficient food and sleep. Such conditions obtain chiefly in women (less frequently in men) of fine intellectual ability, conscientiousness and ambition. Physical overwork with unintellectual women has no such effect. Quite analogous to the above are the conditions of care and sorrow, especially in women who are able for a long time to conceal and control their emotions. The usual consequence of such states of mind is disregard of food and insufficient sleep. Instances of acquired neurasthenia are presented in families of several girls and boys, where one or more of the former are neurasthenic while the latter are vigorous and athletic. Boys delighting in vigorous exercise do not, as is the case with girls, lose appetite and sleep.

The effects of nervous exhaustion in boys are usually much less grave than in girls; as a rule such effects are manifested in mental, not muscular, tiredness, and they are relieved by air and exercise, while in girls and women those influences are shunned because they seem to increase the tiredness.

Predisposition—The temperament, or what in modern phraseology is called the personal equation, plays a visible but uncontrollable part in the progress of neurasthenia, as temperament greatly determines the other imperfectly known condition known as predispo-

sition. Where the disease is hereditary, it is easy to say that the predisposition is due to that source; where there is no history of heredity and where neurasthenia exists in the last members of a generation, it may be attributed to acquired predisposition which needed only the exciting cause to establish the disease in its most typical form.

One of the most common forms of neurasthenia, often quite intractable, results from a serious defect in our public school system, one which affects chiefly girls from twelve to fourteen years of age. The following is a brief example: The child rises late with no appetite for breakfast and no time to eat it if so inclined. The lessons, however, have been learned the evening before, and the school work is begun with an ambitious will and a crammed mind, and continues with one intermission of often not more than ten minutes for three or four hours. The pupil arrives at home ravenously hungry, eats too fast, and too much of injudiciously prepared food, too long in digesting to leave room for an appetite for even a light evening meal, or even for a breakfast the next morning.

In another case the girl or boy grows desperately hungry while at school, but being unprovided with food (lunch), goes on with the school exercises, at the end of which the sense of hunger has vanished and has been replaced by an aversion to normal food, with a possible craving for something pungent and indigestible. This observation can easily be made in many instances, and will, in as many cases, be seen to lead to nervous prostration, which is then treated by vile, patented concoctions consisting largely of whiskey, under the name of "tonics," while the patient needs only the best that a legitimate market affords prepared in a sensible manner.

Typical Cases Ending in Rapid Recovery.—Curative results have already been indicated in what has been said above, and further indications for treatment may be gathered from a few cases of extremely rapid recovery of apparently incurable cases, to which brief allusion will here be made. A woman of forty had been a victim of grave neurasthenia for five years. In the absence of an inclination to exert herself, she had, during that period, been mostly confined to her bed or lounge, in the meantime giving birth to two children, going through gestation and confinement normally, without recovering from neurasthenic prostration which, in the course of some years more, rendered her entirely helpless. Her condition was associated

with a feeling of dropping to pieces unless supported and braced by a harness of wood, iron and leather, in which she "sat up" for several hours each day, spending the rest of the time in bed. Having left the patient in this condition, it was reported before the writer's next professional visit that Mrs. —— had been cured, and that she was able to go out like other people. A visit to the house confirmed the report. The patient came to the door herself, and in a quiet manner, entirely without the least expression of joy or wonder at her release, stated, that having heard of a famous "magnetic physician," she summoned him, was ordered by him to arise and stand; protesting that it was impossible, she was raised to her feet and again ordered to stand, then to walk. Fearing that she would fall, she begged the magnetic doctor to support her, which he peremptorily refused, saying she might fall if she liked. Instead of falling, she had to walk about the room, was then placed upon a lounge and subjected to a severe treatment of rolling and pummelling, and then ordered to dress and sit up until tired, to remain up and about like other people, and to call on the doctor in future, as he would not come so far to the patient again. This happened about twenty-five years ago, and the patient has been in very fair health since; not, however, without occasional relapses, which were finally arrested by insisting that all professional visits by the writer or any other physician to whose sympathy the patient could appeal must cease. This injunction was carried out conscientiously with the best results by the husband of the patient. Perhaps we may learn from this that sometimes, at least, the familiar motto is reversed, and angels rush in where fools fear to tread.

Profiting by this experience, another neurasthenic woman, unmarried, but of most intractable, antagonistic temperament, confined to her bed, in and out of hospitals, for years, wearing out the strength and means of her relatives and the patience of many physicians, was at length abandoned by them. It was a case of spinal and cerebral neurasthenia complicated with hypochondriasis in its most trying form of introspective maunderings and endless description of symptoms. She tormented her advisers by her endless tirades, the indulgence of which invariably aggravated her condition, and were therefore avoided, until once her physician yielded to the patient's importunities for a visit, when he found her in her usual abject state of prostration. Guided by experience derived from cases like the

one first described, he assisted the patient to her feet and marched her, will you nil you, up and down the room until he, at least, was thoroughly tired, and then departed with the promise never to do so again. The patient, on her part, made a number of her unamiable promises, but kept on her feet and let the doctors alone. Though not cured of deeply-rooted morbid mental faults, the neurasthenic phase of her condition had yielded to the change of the antagonistic element of her character from passive to very practical activity.

A third very serious case of this kind occurred in the person of a girl of fifteen, of selfish character, who gradually became bed-ridden with spinal and cerebral neurasthenia, and tormented with the usual multifarious painful sensations, none of which, on the most painstaking physical examination, resulted from demonstrable organic disease of genital or abdominal organs. The patient was most tenderly cared for by her mother, who, in the course of years, became so imbued with the idea of yielding to every wish and whim of the patient, that at length remonstrance became useless. The mother, though recognizing the importance of persuading or urging her daughter to depend more on herself, admitted that she had yielded so long that now she must continue to feed, dress and assist her charge in the most trivial things. Her food had to be placed in her mouth, the position of a hand or foot changed by some one else, although the patient did so spontaneously when she chose. This went on for fifteen years, when the mother, growing old and feeble, died. Her maternal support being gone, the patient at once proved her ability to walk, to dress, to feed herself, and to seek light employment. Though far from well, she is equally far from being a helpless, bed-ridden invalid.

A fourth case, still very vividly impressed on the writer's mind, was one of a healthy, romping girl of 14, who, as happens in this remarkably capricious disease, in the midst of perfect health, one day took to her bed and remained there with all the symptoms of neurasthenia, involving first the spinal and finally the cerebral nerves. This patient was very amiable, conscientious, and sensible, never loquacious, and not troubled with hypochondriacal thoughts or sensations. Tiredness was the only expression she used in describing her feelings. There was literally no variation from this condition, which confined her to her bed for years, till she grew from a girl to

a woman. Eating and sleeping well, and improving perceptibly in personal appearance and character, yet she lay on her couch tired and watched over with unremitting care by a most anxious mother, showing her solicitude and sympathy in every feature. Once, in the second year of the disease, a favorable interruption occurred. The mother, still a young woman, gave birth to another child. During her confinement the neurasthenic patient was in charge of her mother's nurse, assisted by other servants. The nurse, while devoted to the daughter, agreed with the writer that excess of sympathy was injurious, and used her best and judicious endeavors gradually to persuade the patient to make some physical effort at walking and standing. In this she was so successful that in two weeks she accompanied the girl on half-mile walks up and down hill, finally without assistance. Thus, recovery seemed assured, and everything was favorably progressing towards it when the mother, having fully recovered, again took charge of her daughter, with the result that she at once took to her lounge and remained there two years longer. About that time other advice was urged and gladly acceded to, with the result that the case was diagnosed by an eminent surgeon as spinal paralysis in consequence of concussion, though it could never be shown when and where it occurred. Salves, plasters, anodynes, nervines, and electricity did no good, but effectually destroyed appetite and digestion, which hitherto had been normal. So this adviser resigned in favor of a third, who, being a younger and less prejudiced man, agreed perfectly with the writer's original opinion. He advised return to moderate exercise, avoidance of drugs, and less display of sympathy. This, though formerly rejected as "unkind," was now acceded to as coming from a nerve-specialist, fresh from Europe, at that time very rare. Still attending the other members of the family, the writer had ample opportunity of observing the course of the case. Improvement was very slow and uncertain till financial misfortune overtook the family. Almost with a bound our patient left her couch, and, organizing a kindergarten, strove energetically in supporting herself and assisting her mother. The change came about in less than three weeks, and resulted in perfect recovery.

At this point another very instructive case of very speedy recovery, after six or seven years of neurasthenic prostration, deserves to be mentioned. A woman of 35 had been in bed and on the

lounge most of the time for nearly seven years, at the end of which time she became my patient, her regular medical attendant having gone to Europe. She was of very amiable disposition and as sensitive as she was weak. Her symptoms, as in the other cases, were instantaneous exhaustion on the least physical exertion. She could give herself up to no mental occupation beyond directing her household affairs, the education of her son, and the rehearsal of her numerous sensations. She had not been my patient long when her husband failed in business, so that the family was reduced from very comfortable circumstances to a condition which made it necessary for the patient to make her own living and that of the family. This she almost at once proceeded to do, setting aside all other considerations and establishing a boarding-house, where she did most of the work herself. This she has done now for ten or twelve years without a serious relapse. The time involved in the period of convalescence was scarcely more than three weeks, although her work may be said to have begun at the moment her resolution was taken.

Prognostics.—From these and other cases in and outside of the writer's practice, it is safe to say that the majority of cases of neurasthenia recover, though years may elapse before that period. We learn, furthermore, that recoveries, especially of very inveterate cases, depend on conditions beyond the control of the physician, as was the case in the above-recorded instances, where circumstances forced the patient to cease to wish for recovery and to make an effort of the will. This having been once accomplished, self-confidence, for a long time in abeyance, was permanently restored.

Curability, further, depends very much on the temperament of the patient, whether amiable, tractable and confiding in the honest endeavors of the physician, or whether refractory, suspicious, untruthful, selfish and antagonistic, of a disposition impossible to win over on account of unnatural distrust of every well-meaning person. The degree of intelligence of patients also has a pronounced influence on the result. The most readily curable cases are those acquired without hereditary predisposition, where the cause is found in the absence of food and sleep, also where sorrow and anxiety can be averted or counteracted by judicious conduct of near relatives and friends.

Dietetic Treatment.—This, as medicinal treatment, must be governed by the stage at which the case comes into the physician's hands—whether yet in its prodromal, its acute or its chronic phase. The prodromal stage of the disease has no very decided pathognomonic signs. The most that can be recognized in this stage is that the patient's habits or duties are of a kind which will eventually lead to obdurate neurasthenia if not arrested in time by removing the exciting causes. Too much pleasure, as well as too much care, especially in girls and women, tends to neglect of food and rest, in the absence of which, excitement, whether of pleasure or care, begets a state of unrest in which repose is disagreeable. With such a condition comes a list of incipient casual complaints of headache, imperfect sleep, notional ways of eating, working or playing. A few questions will determine whether the patient is living according to normal or abnormal habits with regard to appetite, sleep and occupation. Where these are found, their alteration to normal ways must be insisted on. It is unnecessary to say that this is easier said than done, for it will probably meet with serious objections on the part of the patient, if not on that of her relatives; for most likely she has examinations for college to prepare for, involving several months of close and careful study at night, and the patient cannot waste time in sleeping and eating while cramming that little excited and ambitious brain. A failure in the examinations would be as much of a disappointment to parents as to patient, who proves, as usual, that this appellation is a misnomer. She accordingly goes on as she pleases, impelled by an increasing morbidly ambitious impulse, and the result is likely to be the mournful satisfaction on the part of the physician of being obliged to say, "I told you before what would happen." Of course, all regret the now evident nerve-prostration, while, if the doctor had succeeded in enforcing his rules, he would in many cases experience the still more painful reproach of having been too severe. Nevertheless, absolute firmness and a kindly but unflinching exertion of his will, without the least compromise, reward the physician with the best results in such cases.

When the case, after the stage of excitement and untiring restlessness (at which it would still be speedily curable by simple dietetic rules) has, after weeks or months, entered upon the phase of painful prostration, here we encounter backache, oppressive headache, and absolute loss of mental or bodily endurance, measures of

dietetic management are much less effective and much more difficult to find. It is at this stage that slight rise of temperature will occur, especially towards evening; then the backache and headache disappear, the pallor is replaced by a flush of color, the eyes lose their listless look, and the patient is inclined to enter upon some diversion or excitement, followed by a restless night and a morning of exhaustion and a renewal of all painful sensations. Most of such patients feel much better in the evening when they are ready for some entertainment, while in a normal state this would be the time for relaxation and repose.

The dietetic treatment of this stage is methodical rest. In severe cases the patient will do well to remain in bed for several days or even for weeks. It is well to shorten this period as much as possible and to insist on walking about, or, at least, sitting for a specified time every day. This may be varied by equally specified periods of rest in the recumbent position.

Irregularities of eating are at this and at all times to be superseded by the most rigid regularity of meals. The traditional and conventional three-meal system, however well adapted to the needs of a vigorous man or woman, does not agree with the neurasthenic patient. It is much better that these should eat oftener; four times a day is best in most cases, for the simple reason that in this way a patient, while eating less at a time, consumes more food in the aggregate.

As neurasthenic patients are rarely troubled with absolute aversion to wholesome food, they are generally able to consume a liberal quantity, about which it is only needful to remark here that the food should be selected from among the articles and dishes which the patient likes, provided they belong to the order of good, normal articles of food, to the exclusion of those which simply please the taste without being digestible. A dish entirely of meat or "animal food" is as far from being a good diet for neurasthenics as one consisting entirely of "vegetable" food. As a rule, the diet list should comprise one-third of nitrogenous material and two-thirds of carbohydrates. Together with these, it is a great mistake to neglect the fats, such as good butter and the fats of meats. And, lastly, every patient of this kind should be made to drink some water often, a dietetic feature too often neglected.

During this stage, actually fatiguing exercise of body and mind

should be avoided, while, on the other hand, the patient's mind should be directed away from herself, in which she is much assisted by withholding a certain kind of emotional sympathy, quite as natural as it is difficult to repress on the part of affectionate persons. Of this, a few words further on.

There is no definite time for the duration of this stage, which, however, depends largely on the time during which the exciting causes have acted, either aided by or without a predisposition. It is certain, however, that the sooner it is recognized and the exciting causes eliminated, so much the sooner recovery will begin. But there is a stage at which the best of experience and judgment often fail, especially in very inveterate cases. If the case is one of a patient whom the physician has had opportunity of watching at least since the earlier stages, the difficulty is not so great as it is in old cases of many months or even of several years' duration which come to treatment late. In these, the line between the intermediate stage and incipient convalescence cannot be drawn. The patient is as neurasthenic and hypochondriacal as ever; cannot bear the slightest mental or bodily exertion, not even a word or a look, without signs of apparent exhaustion, while nearly the whole time is spent in bed under anxious care of sympathetic attendants. In such cases, having become assured, by careful physical examination, of the absence of organic disease, seeing the patient generally well nourished and in fair muscular condition, the physician is warranted in assuming that the disease has run its course, that whatever morbid (pathological) process there may have been progressing in the nervous system, this process has now come to an end, but it has left the patient's mental condition habituated to the moods of the past months or years, and fixed, as it were, indelibly in the memory. It is the habit that now remains, not the disease.

If reasonably sure of this, and calling to mind the rapid recoveries and the circumstances attending them, as above detailed, the physician is now safe in ordering a more energetic treatment, calculated to rouse the self-reliance of the patient. All visible signs of sympathy must now be set aside; the actions and demeanor of the attendants should, from this time, if not before, be changed so as to give the patient the impression that she is no longer an invalid, but expected to rely on her own exertions. Instead of being fed, the food should be placed where she must go for and eat it. She should

now be expected to dress and attend, without assistance, to her natural wants. This, with some temperaments, is almost impossible, with all extremely difficult. The best course to pursue is to remove such patients from sympathetic relatives or friends, and to place them in charge of kind, reliable, but eminently practical nurses.

The first effect of this is either to throw the patient into a state of helpless despondency, which, again appealing powerfully to the sympathies of those nearest to her, often frustrates the physician's plans which, if firmly but kindly adhered to, would, ere long, prove their superiority by signs of returning self-reliance and absence of complaints on the part of the patient. A second form of effect is that occurring in patients of obstreperous, selfish disposition, whose opposition and even anger is aroused by being thrown on their own resources after the removal of depressing and unpractical sympathy. This opposition or temper, often manifested in all sorts of intrigues and subterfuges on the part of the patient, if not supinely yielded to by sympathetic persons, will finally be replaced by a more rational disposition. On the whole, anger or active opposition are signs of returning energy, which, once coming to the consciousness of the patient, takes the form of self-reliance. It is in this way that the cures of chronic cases above related can be explained, and physicians should profit by such experiences for the benefit of their patients.

The general dietetic management now readily follows from what has been said, and needs only a few general modifications. The first duty of the physician will be to test the degree of reliance to be placed on the patient and her friends, and to win them over if possible to his plans, and his success will be in proportion to the degree of confidence he is able to inspire. This personal confidence should not degenerate into a mere personal liking or attachment of a sympathy-craving neurasthenic who should discover henceforth that all sentimental expressions of sympathy are about to take a practical form, aiming at a definite result—the patient's health—which she wishes but cannot exert her will to attain. The best and often the only way to do away with sentiment and to reach practical kindness is to remove the patient from certain home influences, and to place her in a hospital or elsewhere under the management of competent nurses who, without being selfish, know how to exert a certain amount of wholesome push as fast as the patient can bear it. With-

out the removal of sentimental sympathy, all efforts at counteracting the purely hypochondriacal side of neurasthenia are useless.

In these cases of neurasthenia as yet uncomplicated with the hypochondriacal element of introspective nosomania, there is only one unconditional rule to be followed, especially in acquired cases whose evident cause was incessant, conscientious work of mind and body, together with insufficient food and sleep. Such cases come on very insidiously, the loss of strength—that is, the actual waste of nerve-substance—being just a trifle greater than the quantity restored, the patient unconsciously using up a minute part of her capital every day. Here the rule should be to reverse matters by insuring a supply of nourishment and time for its assimilation greater than was the case heretofore. The cases of young school-girls belong in this class. The time of food and rest should be carefully controlled at home, the duty of the physician being to educate indifferent and ignorant parents up to an appreciation of the nature of the case. It is generally not difficult to open their eyes through the medium of their anxiety concerning their children's health. Having thus insured sufficient rest and food at home, the physician's next object of attention should be the regulations of the school. Here is the point where teachers have an opportunity of exerting their most practical influence. It should be made obligatory on the part of teachers to institute inquiry as to whether pupils have had their meals before coming to school. This they could often ascertain without a question, by reading the pupil's condition in her emaciated form, pale face and nervous manner. To guard against neglect at home, it would be an easy matter to insist that all pupils of public and private schools should bring with them some proper food. The few who do so generally bring sweets—an apple, orange or a few dry crackers—when a piece of good bread and slice of cold meat would be what they actually need. All pupils should pass inspection, and if remiss in this important particular, the delinquent should be dismissed with several marks against her. To expect this of teachers would be a great advance in the place of futile innovations of endeavoring to send forth from our common schools graduates in arts and sciences.

Sudden Effects.—A large number of cases of neurasthenia, especially those complicated with inveterate hypochondriasis, are frequently traced to some sudden occurrence, having the effect of a

mental or physical shock. In one patient, a vigorous girl, used to romping, climbing and running like a boy, the cause was supposed to be a slight thump she received during a game of blindman's-buff. She thought nothing of it at the time, but it was suggested long after the patient's illness began. In another case some mental shock of joy or grief, not very severe and such as is often experienced in every person's life, is the beginning of months of nervous prostration.

There is quite an array of evidence that neurasthenia which has entered upon a hypochondriacal stage or complication with or without a strong hysterical admixture, is curable by sudden impressions in the form of a shock, or more gradually by frequent repetitions of an impression. Such cases, as I have shown above, occur most commonly in the stage when what may be considered the essential pathological disturbances of function have run their course and have left the patient in a state of mental disturbance which indicates that the patient's recovery depends entirely upon her volition. But there is none, and so far nothing has succeeded in arousing it. Persuasion is as useless and irritating as argument would be in a case of insanity with a fixed illusion. The resemblance between this and the state of mind of a hypochondriacal neurasthenic is very close. She cannot move nor think. Exhaustion overcomes her and keeps her its victim for years, when suddenly the scene changes, and a few days or weeks suffice to restore the patient to activity. In one instance it is attributed to medical, in another to "mind cure," in a third to "Christian science;" in still other cases massage has done it, in others again "magnetic influence," in others the very powerful factor necessity. It is certain that cases of this kind, produced by sudden effects on the mind of a predisposed person, are also cured by such effects. Whatever the visible form of these effects may be —whether that of "Christian science," joy, grief or absolute inexorable necessity, there is always to be noticed a certain force and condition involving the modern idea of *suggestion*, which comes to the patient in an irresistible degree and now sets the function of the will in motion again.

Experience teaches that it is by no means a matter of indifference which of these forms of effect are brought into action. In one case it is the professional Christian scientist's method, in another the almost brutal exertion of a person's will combined with some phys-

ical force. In either case the patient is aroused from his inertia, and discovers his powers of mental and bodily ability to act.

A deplorable result is that recoveries after such effects are attributed in the popular mind to supernatural causes. That such is not the case may be gathered from instances occurring in very sensible and intelligent patients, whose reason is scarcely ever so far disturbed and weakened that they do not resent the proposition of trying, *e.g.*, Christian science or mind cure.

Nevertheless, it is the mind cure which the intelligent patient needs quite as much as the ignorant and superstitious person; the difference is only the form in which the influencing force is applied. While in one case it is obedience to the candidly expressed instructions of the physician, in the other case the result is due to mystification. In either case it is the powerful stimulus of hope and aroused confidence that recovery will be realized.

The definition of suggestion does not fully cover the meaning, because the influence employed is greater than mere suggestion. The physician's plan of action should be straightforward assurance of recovery, a direct appeal to hope, and an unceasing endeavor to arouse the self-reliance of the patient, not so much by verbal exhortations as by a manner and deportment from which the patient learns more readily than from words what is expected. If the attitude of the physician is appreciated, and seconded by the relatives and attendants, a favorable result is much more certain to follow.

Hypnotism is not advisable. There are now existing ancient neurasthenic invalids dating from the times of spiritualism when they were famous "mediums." Hypnotism weakens the will and nervous endurance, and produces a predisposition to emotional nervousness with an intractable erotic admixture. The suggestions sought to be instilled into a hypnotized patient amount to nothing. The mental influence of mystical treatment administered while the patient is awake is much more powerful in awaking hope and confidence than the uncertain effects of an abnormal state like that of hypnotism. Mystification, again, though sometimes unavoidable with the best intention, is less powerful than direct and intelligible encouragement. While resort to mystification should be shunned by reputable physicians, the question arises as to what shall be done with the many who, from lack of intelligence or education, are entirely beyond the reach of honest common sense, and who will persist

in mystifying themselves, who remain neurasthenic invalids in spite of the best regulations of the physician, and who do not recover unless their encouragement follows some mystical formalities which alone arouse their "faith" and finally their confidence and will-power. For the present there is no way out of the dilemma but to submit such patients to the suggestive methods of what is popularly known as mind cure and Christian science. In doing so, physicians should use their influence as far as possible in selecting the most honest persons of this class.

Discussion.

James C. Wood, M.D.: I have nothing but words of praise for Dr. Wesselhoeft's excellent paper. It is very evident that the author's inspiration came not from books but from actual contact with neurasthenic subjects, for the impress of originality is most conspicuous. It is a production which could only come from one of experience and from a reasoner. I consider it a most valuable contribution to the literature of that now most interesting subject, "neurasthenia."

The doctor, in his paper, has sometimes used the term "neurosthenia" instead of "neurasthenia." The first of these means, according to Thomas, great nervous power or excitement; the second, nervous debility. I take it from the context that the subject dealt with is neurasthenia. To the average mind there exists what seems to me a needless confusion regarding the terms, nervous prostration, hysteria and hystero-neurosis. As I understand these terms they define distinct conditions, though there is a frequent blending the one with the other. The term nervous prostration, which is a synonym of neurasthenia, defines itself; the term hysteria should be restricted to those general neuroses characterized particularly by psychical manifestations, though not infrequently by motor, sensory, secretory, vasomotor and reflex derangements as well; while the term hystero-neurosis implies the uterine origin of symptoms manifesting themselves in organs remote from the uterus without structural changes in such organs, being the direct result of reflex nervous influence starting from the uterus. The last term does not occur in the paper under discussion. From the standpoint of a gynæcologist I think that this is misleading.

Let us see why and how it is that these three conditions (I will not call them diseases) are so frequently associated. I think that all will admit the frequent occurrence in women of reflex symptoms, the result of pelvic lesions. An irritation starting from the pelvis is conveyed to the genito-spinal centre, thence to any or all organs with which this centre communicates. The organ oftener involved

than any other is the stomach. This is shown by the frequent occurrence of nausea and vomiting following conception. The nervous system may have been previously involved, but oftener it becomes so only after the nutrition is depraved, which, sooner or later, occurs if the pelvic lesion is not removed. The depraved blood fails to supply the nerve centres with that which they need to sustain them, and they become anæmic. Prostration is but a subjective manifestation of the anæmia, and it varies in degree from a slight indisposition to the most abject helplessness.

If, then, nervous prostration may have its beginning in a pelvic lesion, is it possible for a pelvic lesion to be inaugurated by systemic disturbances? Personally, I believe that it is, and offer this explanation as the *modus operandi* by which such a lesion is induced: Marked circulatory changes nearly always attend nervous prostration. The circulation is presided over by the vaso-motor system, and wear and repair depend upon the proper regulation of this system. If it becomes disturbed, the bloodvessels dilate or contract unduly, with resulting local hyperæmia or local anæmia, as the case may be. The climacteric flushes are the result of such disturbance. The alternate coldness and heat of the extremities, so often associated with rectal and uterine lesions, is another familiar illustration. If the brain is involved, either insomnia or drowsiness occur, depending upon whether the brain is anæmic or hyperæmic. Flatulence, gastralgia, and nervous dyspepsia result when the stomach is similarly affected. The womb and the ovaries, because of the periodical congestion imposed upon them, are oftener implicated by these unnatural circulatory disturbances than any of the pelvic organs, and in time also become unduly hyperæmic or anæmic, as the case may be.

It will thus be seen that nervous prostration may exist independently of pelvic lesions, or, conversely, pelvic lesions may exist independently of nervous prostration. Nevertheless, the two are frequently associated, and this fact ought, I believe, to be kept in mind in dealing with the affection known as neurasthenia. Hysterical manifestations nearly always come to the surface in nervous prostration, and they also frequently attend pelvic lesions. Indeed, the term "hystero-psychosis" has been coined for the purpose of defining certain psychical disturbances of presumably pelvic origin, and in the broadest sense neurasthenia is not uncommonly an hystero-neurosis. It is the frequent association of these three conditions which, it seems to me, makes it more practicable to study them conjointly.

The special symptoms of nervous prostration are most variable. Introspection, as Dr. Wesselhoeft has pointed out, makes of the patient a nosomaniac. The anæmic nerve centres are unduly impressionable, and a mental shock which would not seriously affect a

stronger and more rugged woman falls with crushing force upon one whose nutrition is already depraved. In this way are developed disorders of sensibility, alterations of mobility, circulatory disturbances, anomalies of secretion and excretion, disorders of the gastro-intestinal canal, dermatoses, and general and psychical disturbances of all kinds. Many of these affections start from pelvic lesions, and are nearly always associated with depravity of nutrition and more or less nervous prostration.

Some of the worst symptoms of neurasthenia with which I have had to contend have been hyperaesthesia of the articulations, giving rise to the so-called "hysterical joint." Here the prostration is usually not profound, and it is possible to apply the somewhat energetic treatment recommended by Dr. Wesselhoeft. I remember one case very distinctly, the detailed history of which I shall give in another place, which brought me much reputation because of the "remarkable" cure I was fortunate enough to make.

The patient, a beautiful girl of eighteen, had been bed-ridden for three years with supposed hip-joint disease. She was in college before assuming the *rôle* of an invalid, and worried much over her studies and work. She sustained a fall a short time previously to taking to her bed, and to this fall the injury to the hip was attributed. She had been from physician to physician and from sanitarium to sanitarium without receiving benefit. All of the numerous medical men under whose care she had been, directed their attention to the hip and applied the classical treatment for *morbus coxarius* without avail. The patient had finally reached a point where introspection was her chief occupation and her mind dwelt almost continually upon a "diseased hip." She was finally brought to me, coming in an invalid's chair and looking the very picture of despondency. There was a slight degree of anæmia, though this was not marked. Notwithstanding the expression of abjectness the girl did not look seriously ill. The hip was excessively tender upon pressure, but there was no local increase of temperature, no evidences of fever and suppuration, and forcible apposition by striking the heel was not very painful. More or less spastic contraction of the flexor muscles of the affected side existed, which gave to the limb an appearance of actual shortening, which was very deceptive. Hysterical symptoms were common. On examination I found the left ovary exquisitely tender. Compression of the ovary increased the pain in the hip most decidedly and gave rise to much nervous agitation. I did not, therefore, deem it wise to recommend local treatment other than the daily use of the hot douche. She had long been a victim of ovarian dysmenorrhœa. I placed upon the ankle of the affected limb three pounds of bar-lead, prescribed a pair of crutches and insisted upon her walking. The lead was used to overcome the spastic contraction as well as for its moral effect. I

did not deem the joint lesion of such a character as to need extension. In two months' time this patient discarded her crutches for a cane. Six weeks later she put up the cane and is now perfectly well.

This was a case in which somewhat harsh measures were eminently appropriate.

In marked contrast to the case just recorded is the following: Mrs. ——, æt. 47, a widow for twenty years. She is a devoted churchwoman, and for years was a leader in all charitable work done in the community in which she resided. Through friends she was urged to consult me, and I think that the call to the neighboring town in which she lived was countermanded at least four or five times before she finally mustered up courage and strength enough to see me. Upon reaching the bedside I found my patient in a room made dark by closed blinds, over which were hung heavy blankets to shut out every ray of light. The mirror was turned toward the wall for fear a ray of light might strike it and flash throughout the darkened room. Nor did the patient rest under these extreme precautions, for the eyes were protected with two pairs of colored glasses with side attachments. Hyperæsthesia of the sense of hearing was equally marked and the noise was excluded from the room by double doors whose keyholes were stuffed with cotton. She also had her ears filled with cotton, over which she wore ear-mufflers. She was emaciated to an extreme degree, and had been reduced to her miserable condition by a series of events which frequently precede profound neurasthenia. Her husband was killed during the war, and she was left childless. Twelve months previous to taking to her bed she nursed her mother through a long and fatal illness. This greatly prostrated her, yet she kept up until a favorite brother-in-law was thrown from a carriage and killed. This was the last straw, and the shock compelled her to take to her bed. In due time loss of appetite with irritability of the stomach developed, which, of course, led to marked depravity of nutrition. With the anæmia came hyperæsthesia of the special senses, spinal irritation, headache, hysterical manifestations, etc. There was no serious pelvic lesion, although she had been much treated for an alleged uterine displacement with congestion. Unfortunately, she was encouraged, instead of discouraged, in her invalidism, and she soon became a nosomaniac of the worst type. She had written down her symptoms one at a time, and the record is such a typical one that I should like to give it in full, but time forbids.

With great difficulty the patient was moved on a couch to a private hospital and placed under the Weir Mitchell treatment. I ignored the pelvic trouble entirely. It is unnecessary to give in detail the progress of the case from day to day after this treatment was inaugurated. Suffice it to say that the improvement was of the

most marked character, and in six weeks from the time she entered the hospital she walked to her carriage with her eyes and ears unprotected. She soon resumed her church and charitable work, in which she again takes much delight.

This woman wanted to get well. She was a woman of pure motives and high ideals. She had, in the language of Dr. Wesselhoeft, the *wish*, but, unaided, not the *will*. She required the aid of an intelligent, strong-minded nurse who could bring to her exercise applied in such a way as to enable her to assimilate food without the expenditure of nerve force. She co-operated with her physician and nurse in every possible way, and as soon as the anæmic nerve-cells became flushed with new blood she began to improve. To have commanded this patient "to take up her bed and walk" before improving her nutrition would have been as unscientific as to have placed the first patient in bed with extension and counter-extension applied to the limb. I know of no class of cases requiring for their successful treatment more tact and discrimination than that under consideration.

I feel confident that I have many times cut the affection short in its prodromal stage by removing the girl from college work and insisting upon open-air exercise. Static electricity has, in my hands, proved exceedingly useful both during the prodromal stage and that of convalescence.

I will conclude by saying that I have been impressed with the frequency with which an hereditary history of epilepsy has been met with in the cases of neurasthenia passing under my observation.

*BRIGHT'S DISEASE.**

By P. Jousset, M.D., Paris, France.

Bright demonstrated the existence of a morbid species characterized by inflammation of the kidney, albuminuria and œdema. He deemed the different clinical forms which this disease presents different phases of the same morbid condition. Physicians, after him, struck by the differences which these forms assume, subdivided Bright's disease into two distinct diseases: parenchymatous nephritis and interstitial nephritis. There is, then, a dualist school opposed to the unicist school of Bright. It is represented principally by Lancereau. Is there really a single malady, of different characteristics, according to the phases which it goes through, or do there really exist several affections of different nature, incorrectly joined together by the single name of "Bright's disease?"

This question is difficult to answer. On the one hand is a fact impossible to contest, namely, that when parenchymatous nephritis ends neither by recovery nor by death, either in the first weeks or the first months of the disease, but pursues a slow and chronic course, it is soon accompanied by the symptoms and the lesions of interstitial nephritis, so that as a consequence in such a case, the interstitial nephritis, with ultimate renal atrophy, is, indeed, the last phase of the parenchymatous nephritis; and that in such a case the theory of Bright is absolutely true.

On the other hand, it cannot be denied that there are cases in which the disease begins in an insidious manner, progresses very slowly, with more or less complete periods of remission, and with periods of aggravation characterized by a symptomatic complexus which has no resemblance to that of parenchymatous nephritis, and in which the kidney, throughout all periods of the disease, shows the lesions of interstitial nephritis, and ends fatally in renal atrophy.

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* Translated by Clifford Mitchell, M.D., Chicago.

In such cases the nephritis is interstitial in the outset, and rightly distinguished from Bright's disease proper. To this must be added that interstitial nephritis is always joined to arterio-sclerosis; that it is, as it were, the last symptom of gout, of syphilis and of lead-poisoning; that it is accompanied, in consequence, by the hepatic, pulmonary, encephalic, and, especially, cardiac lesions common to arterio-sclerosis.

Physicians who, like Lecorché and Talamon, defend the unicist doctrine of Bright's disease, strive to show that in acute cases, designated by the name of parenchymatous nephrites, there is always an affection of the heart and of the vessels analogous to that which is always observed in interstitial nephritis. They affirm that every nephritis is always accompanied by considerable increase in arterial pressure, and consequently by dilatation and then by hypertrophy of the heart.

Traube has explained these cardiac and vascular phenomena by the obstacle which the arterial circulation meets in the kidney in consequence of inflammation there. This explanation is questionable, but, what is more important, dilatation of the heart is by no means always found in all cases of Bright's disease. (Lecorché, page 419.)

Thus, Bamberger's statistics show 807 cases of primary Bright's disease to be accompanied only 344 times by hypertrophy of the heart.

The statistics of Galabin cover 101 cases and show only 34 cases of hypertrophy. Upon autopsies made at the Charity Hospital in Berlin, Vais remarked that in 20 cases of parenchymatous nephritis, hypertrophy existed in 14 cases.

Labadie-Lagrave, in the *Dictionary of Medicine and Surgery*, says, word for word, "that, if a certain degree of dilatation of the ventricles, together with fatty degeneration of the myocardium, is the rule in chronic parenchymatous nephritis, hypertrophy of the left ventricle is wholly foreign to the symptomatology of this nephritis." (Article on "The Kidney," page 783.)

Experiments made upon animals are not sufficiently unanimous in results to show that hindrance to the circulation determines cardiac hypertrophy and elevation of arterial pressure.

Ludwig tied the renal arteries without causing either elevation of arterial pressure or hypertrophy of the heart. Grawitz and Israel,

contracting the renal artery and removing one of the kidneys, produced hypertrophy of the left ventricle, but did not increase arterial pressure.

Lewinski alone produced hypertrophy of the left heart and an increase in the arterial tension by contracting the renal arteries in dogs. (Lecorché, page 407.)

The conclusion from the total of these experiments, and also from clinical facts, is that hypertrophy of the left ventricle, instead of being closely united to the existence of the parenchymatous nephritis, is only an exceptional occurrence in the course of this disease. Lecorché and Talamon, and those who uphold the doctrine of absolute unity, plainly exaggerate when they speak of hypertrophy of the heart as a constant lesion in this disease. Increase of arterial tension, which, according to Huchard, has always for its corollary chronic inflammation of the arteries and hypertrophy of the heart, is the constant lesion of interstitial nephritis, for the reason that this latter form of disease is joined to the existence of gout, or of lead-poisoning, which has for its lesion general arterio-sclerosis.

It is difficult to say whether interstitial nephritis, supervening as a terminal phase of parenchymatous nephritis, is accompanied by general arterio-sclerosis or not. It is difficult to say, because we have not yet studied this question of pathological anatomy, nor distinguished sufficiently simple interstitial nephritis from the interstitial nephritis which follows parenchymatous nephritis, and which constitutes Bright's disease in its last stage.

Upon the whole, then, we hold that there is such a thing as an interstitial nephritis which, from beginning to end, has always the characteristics of sclerosis; that this nephritis is accompanied always by intense thirst, by polyuria, by albumin in the urine, usually in small quantity and sometimes but intermittently present, by pale urine of low specific gravity, with notable diminution of urea. Let us add, as a characteristic of this form of nephritis, that it is not usually accompanied by œdema, except in the period of cachexia.

Interstitial nephritis is, then, in symptoms and in lesions, absolutely distinct from parenchymatous nephritis. It is also distinguished by an extremely chronic course, a very long duration, and a constant termination by uræmic accidents.

Interstitial nephritis is, moreover, plainly distinguished from

parenchymatous disease by its relations with gout, plumbism, and the general arterio-sclerosis accompanying these two latter conditions.

We shall, therefore, take two chapters for the consideration of our subject: one for Bright's disease, a morbid species; the other for interstitial nephritis, a disorder depending on arterio-sclerosis.

Chapter First.—Bright's Disease.

Bright's disease is characterized by anasarca, albuminuria, and inflammation of the kidney, first parenchymatous, but finally interstitial, if the disease lasts long enough.

Bright's disease has two forms—one markedly acute in its beginning, the other of insidious origin and chronic course.

1. Acute Bright's Disease.—This may begin when the patient is in full health, or, on the contrary, by way of complication, in the course or at the end of acute diseases: scarlet fever, diphtheria, typhoid fever, pneumonia, etc.

An intense febrile movement, vomiting and headache mark the beginning of the disease. The patient usually feels a dull pain in the region of the kidneys, while at the same time the urine is diminished in quantity, although micturition is frequent; the urine often contains blood, is always high-colored, of specific gravity lower than normal—falling to 1010 or even 1006, together with, at the same time, a great diminution of urea, which falls as low as 9 grammes to the litre; but the characteristic feature is the presence of albumin in quantity habitually considerable (4, 6, 8, 12 grammes or more); sometimes the urine, when heated, solidifies in the tube.

At the same time the dropsy shows itself. It begins almost always in the face, in the eyelids or in the subconjunctival tissue. There is then observed what is called the Brightic eye; the eye is brilliant, as when full of tears, and there is shown the raising of the ocular conjunctiva by a layer of liquid. Œdema increases over the face, the natural lines disappear, and the face—immobile, pale and shining—appears like marble. Dropsy spreads over the rest of the body and anasarca becomes general. The disease, thus established, progresses rapidly, and may terminate in some days or some weeks by death or recovery.

Death takes place customarily either from internal œdema (œdema of the lung, œdema of the glottis, pleuritic effusion, pericarditis,

encephalic dropsy); often general anasarca, diarrhœa and progressive enfeeblement characterize the last days of the disease; at other times uræmic accidents, of which the most frequent are eclampsia and coma, come to put an end to the sufferings of the patient.

When the disease is to terminate by recovery, the first symptom is the increase of the urine, which rises rapidly to 1, 2, 3 and 4 litres. At the same time the febrile movement disappears and anasarca diminishes in proportion to the increase of the urine.

This liquid undergoes considerable change in composition—diminution of albumin, increase in urea, with, at the same time, increase in specific gravity to 1018 and 1022, are what we principally observe.

When this acute form of Bright's disease terminates neither by death nor recovery, it passes into the chronic state. The febrile movement disappears and anasarca diminishes. The urine increases in quantity; the albumin is less abundant, but persists. At this time the disease presents the course and symptoms which we shall find again soon when describing Bright's disease, chronic from the outset.

2. Bright's Disease, Chronic from the Outset.—This form, like the preceding, may follow an eruptive fever, typhoid fever, diphtheria or pneumonia, but in this case the beginning, instead of being febrile and tumultuous, is wholly unperceived and unrecognized; only by asking patients about their past may we succeed in connecting this chronic form of Bright's disease to the previous existence of one of the diseases in which parenchymatous inflammation of the kidney is observed. In other cases damp cold, long continued, is the only cause to which we may attribute the development of the disease. Lastly, there are cases in which it is impossible to find or to establish the ætiology of this form of Bright's disease, chronic from the outset. Loss of strength, a particular kind of anæmia, with paleness of the face, puffiness of the lids, interpalpebral œdema, pale urine voided frequently, especially at night, but in volume below normal, anorexia, and pain in the head mark the beginning of this form.

If one examines the urine, one finds specific gravity diminished from 1006 to 1010; urea falls also sometimes to 9 grammes per litre, but the principal characteristic is the presence of albumen in notable quantity, reaching 4, 6, 8, 10 grammes and more.

After several months the disease shows its character more and more. Oedema increases considerably, changing place, seizing often the face in the morning and the ankles in the evening. There is waxy pallor; loss of strength is marked, while difficulty of breathing is caused by the least movement.

The disease thus established may be prolonged for months, or even longer, but never more than three years.

The course is not regularly progressive; there are exacerbations followed by more or less complete remissions.

The exacerbations are caused usually by a chill, by overwork, by emotion, but especially by errors of diet. They are characterized by a decrease in the urine, which sometimes becomes bloody and contains always a greater quantity of albumin. Anasarca makes progress. There is sometimes vomiting, sometimes headache, and always a loss of strength, until the patient is obliged to keep to his bed. Then amelioration takes place; it is marked by an increase in the quantity of the urine, a dimunition in albumin and anasarca, return of strength and appetite. This remission which is never as complete as in interstitial nephritis, nevertheless allows the patient to resume his occupation, in part, and under the influence of intelligent treatment may be prolonged for a greater or less period of time.

From exacerbation to remission, and from remission to exacerbation, the disease, sometimes slowly, sometimes more rapidly, comes to the period of cachexia. This period is characterized by considerable dropsy. Anasarca distends the lower limbs, the skin of which becomes the seat of erythema, of fissures and sometimes of gangrenous plaques. Effusions form in the peritonæum and in the pleura. A certain degree of pulmonary œdema is usually evident. The urine becomes more and more scanty, albumin is always present, but may diminish in quantity nevertheless, without improvement in the condition of the patient.

Anorexia, vomiting, and diarrhœa, still help to diminish the strength of the patient.

Seated usually upon a chair, because stay in bed is no longer possible, a prey to dyspnœa, resulting from dropsy of the pleura and lungs, pale and swollen, with limbs cracked and dripping incessantly with the liquid which distends them, the patient would die of exhaustion if uræmic accidents did not more usually terminate the dis-

ease. Failure of sight and headache, are the usual symptoms of this ending, which takes place either from eclampsia or from apoplexy, or from asphyxia, caused by pulmonary œdema.

In other cases, Bright's disease assumes a form more chronic and slower. The renal lesion, from parenchymatous becomes interstitial, and the disease shows in every way the symptoms, course, and duration of the sclerotic form which we shall shortly describe.

Pathological Anatomy.—The acute nephritic lesion is essentially a glomerulitis, desquamative and with variable alteration in the tubular epithelium, infiltration of the interstitital tissue by round cells, catarrhal inflammation of the straight tubes, and inflammation of the arterioles.

The kidneys are considerably increased in size; they are sometimes hard and tense, sometimes soft. Hyperplasia is found only in the cortical substance. Divested of their envelope the kidneys are found sometimes of uniform redness, or sometimes presenting a mottled aspect tinged with yellow. The pyramids show a more or less violet red tint.

Microscopical Examination.—More or less advanced inflammation of the glomeruli, which are not all in the same condition; some are congested, others anæmic, some normal. Albuminous and granular exudations from certain capsules take place. At other times the exudations are hæmorrhagic. The tubuli are in general dilated somewhat. The epithelial cells are infiltrated with fat; sometimes pale cylinders, sometimes red globules, the result of hæmorrhages, fill the loops of Henle and the straight canal. The connective stroma is not intact; it is œdematous, and shows round cells, more or less confluent, which indicate a certain degree of interstitial nephritis. Lastly, the small arterioles show cylindrical or fusiform thickening, which is the beginning of an obliteration of these arterioles.

This lesion is susceptible of complete recovery, at least if we may believe clinical experience. In other cases it ends with death. It may also end by passage into the chronic state. And in this case we have to study the evolution of a lesion which ends sooner or later in interstitial nephritis.

This conclusion is not that of authorities who allow the absolute separation of parenchymatous from interstitial nephritis, but is typical of acute nephrites, parenchymatous in character, having

burst forth, either on occasion of typhoid fever, scarlet fever or some other infectious disease, or even in consequence of the effect of cold, and being terminated after several years by the symptoms and lesions of interstital nephritis.

It is impossible to deny the morbid transformation of one of these lesions into the other.

The large red kidneys, more or less mottled with yellow and gray, soft or indurated, are transformed when the disease passes to the chronic state into the large white kidneys. Then, by a continuation of the evolution into small granular kidneys, retracted, white or red.

In the acute period the interstitial tissue is but little attacked. We find at most a few round cells interposed here and there in form of a trail between the tubules and at the openings of the arterioles. But the longer the disease the more are interstitial lesions noticed, leading by their evolution to atrophy and retraction of the kidney. Thus, facts show us that parenchymatous nephritis, when it passes to the chronic state, assumes all the characters of interstitial nephritis.

Chapter II.—Interstitial Nephritis.

We have already said that interstitial nephritis depends upon arterio-sclerosis.

The beginning of interstitial nephritis often passes unperceived; it is characterized by polyuria and polydipsia, analogous to that of diabetes. There is perceived at the same time an increase in arterial tension. It is to this increase of arterial tension that we should attribute the symptom of the "dead finger," deemed by Dieulafoy a sign of nephritis without albuminuria.

In this first period, as a matter of fact, albuminuria shows itself often only in a transitory way, at long intervals, and in quantity estimated with difficulty. As we have already said, the urine is very abundant; it is pale, of very low specific gravity, which varies from 1002 to 1012, containing a quantity of urea less than normal. The urine is slightly turbid, and may reach 2, 3 and 9 litres.

Patients are often tormented by continual headaches. Anorexia, vomiting, or diarrhœa, dimness of vision, and amaurosis are observed in this form as in the preceding, but "in interstitial nephritis, amaurosis is related, not to a primitive alteration in the elements of

the retina, but to a sclerotic alteration of the optic nerve and of the retina." (Lancereau.)

Œdema may be completely lacking during nearly all the course of the disease. It is only when the nephritis has lasted for years, and when the patient becomes cachectic, that a certain degree of dropsy is evident, while at the same time albumin may reach 1, 2, and 3 grammes per litre.

We must call attention to the cardiac symptoms which always accompany interstitial nephritis.

We have already referred to arterial tension. We must add to it hypertrophy of the heart and the "bruit de galop," which is often so diagnostic of this disease.

We must not forget, moreover, that interstitial nephritis is only an affection of arterio-sclerosis, and consequently that it may be accompanied by the cardiac, pulmonary, hepatic, and cerebral symptoms peculiar to this lesion of the arteries.

Interstitial nephritis progresses slowly, and is prolonged for years. It shows, from one time to another, periods of aggravation, characterized either by bloody and scanty urine or by the appearance of œdema, or, above all, by manifestations of uræmic symptoms, of which we shall speak in a moment. These aggravations are always due to errors of diet or to failure to observe the rules of health; subsequently, an amelioration, more or less complete, takes place, and thus the disease is prolonged through many years.

Almost always death comes from uræmic accidents, which may assume two principal forms, pulmonary and cerebral.

In the pulmonary form the patient is seized by paroxysmal dyspnœa, which comes especially at night, and which may be accompanied by pulmonary congestion, with expectoration of rust-colored sputum. This dyspnœa may lead to the death of the patient.

The cerebral form is much more frequent. A number of patients show symptoms of cerebral apoplexy, together with hemiplegia, and die comatose.

Others have veritable attacks of eclampsia, more or less intense and more or less lasting, taking, in severe cases, a subintrant course, such that the patients are in a veritable "etat de mal," and die comatose.

Other patients resist uræmic eclampsia. Some gain their health completely, at least in appearance, and may yet live for a long time after having experienced its attack.

Uræmic accidents are always ushered in by a considerable diminution in the quantity of urine, just as amelioration is accompanied by abundant diuresis. Dimness of vision, increase in headaches, slight twitching of the limbs often precede and usher in serious uræmic accidents.

Ætiology.—The causes of interstitial nephritis are first and foremost the causes of arterio-sclerosis. Abuse of strong liquors, life in a damp locality, and chilling of the body are circumstances which favor localization of arterio-sclerosis in the kidney.

Pathological Anatomy.—In interstitial nephritis the two kidneys are invaded almost equally. In the first stage the lesion is characterized by congestion and increase in the volume of the kidney; the capsule is easily detached from the organ; the parenchyma, slightly soft and pale, varies in color from red to gray, and is sown with capillary dilatation. On section, the cortical substance is brownish, with gray or white stains, the medullary substance of a violet hue. Histological examination shows a more or less abundant proliferation of embryonic elements spread unequally throughout the cortical substance, and seizing upon the connective and vascular tissue of the region of the convoluted canaliculi and of the corpuscles of Malpighi. Sometimes the Malpighian glomeruli are the seat of a hæmorrhage which becomes mixed with the urine.

The kidney diminishes gradually in volume, its tissue is retracted, and its surface becomes roughened in all its extent. The kidney takes on a solid and coriaceous consistency; its capsule becomes adherent and is removed with difficulty. More or less numerous cysts are formed. Atrophy of the kidney takes place upon the cortical substance, which is sometimes reduced to a millimetre. The round cells, of which we have already spoken, stretch out and form fusiform bodies soon to be transformed into cicatricial tissue.

Next retraction supervenes, with atrophy of the convoluted tubes and of the glomeruli.

The epithelia of the tubes undergo a granulo-fatty degeneration, and end by disappearing.

The lesion, having arrived at its last stage, shows the kidneys reduced to the size of a large chestnut, and in weight 190 grammes,* partly transformed into fibrous tissue, and then constituting that which is called the small red kidney.

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* About six ounces Troy.

The renal artery is, like most of the arteries of the body, attacked by arterio-sclerosis.

It is useless to describe here the lesions common to arterio-sclerosis and to gout, of which interstitial nephritis constitutes only an affection.

Differential Diagnosis Between the Two Nephrites.—This paragraph is perhaps superfluous. We wish, however, to call to mind that true Bright's disease is distinguished from interstitial nephritis by the intensity of the anasarca and by urine so well marked in character, namely, scanty and loaded with albumin; while in interstitial nephritis the urine is exceedingly abundant, with albumin scanty, or but a trace. Cardiac symptoms; hypertrophy of the heart, the "bruit de galop;" the symptoms of aortitis; arterial tension, and more or less general arterio-sclerosis serve to distinguish interstitial nephritis and permit us to recognize it.

Prognosis in Bright's Disease.—The prognosis of Bright's disease is always grave. This disease is terminated usually by death in the first days of the malady, or by passage into the chronic state, the termination of which is always fatal. However, it is necessary to remember that complete recovery from Bright's disease may take place. I have records of recovery in cases dating back more than thirty years.

Signs Pointing to Recovery in Bright's Disease.—Diminution of the fever and of the anasarca, but, above all, increase in the quantity of urine, are signs which may foretell an approaching recovery.

As soon as the urine becomes more abundant, it becomes clearer. Blood, if any, disappears. Albumin diminishes and urea increases in quantity. At the same time strength and appetite return, but recovery is not assured until albumin has completely disappeared, and until the urine has resumed its ordinary color, density and chemical composition.

We should not forget that, if recovery is possible, this possibility exists only in the first period of the disease and before the lesions of interstitial nephritis are produced.

Signs of death are, in the first days, an increase in the febrile movement, diminution in the quantity of urine and, most commonly, the appearance of uræmic symptoms; convulsions or coma.

Sometimes erysipelas supervenes as a complication, or some other inflammation, as bronchitis, pneumonia, pleurisy or pericarditis.

The signs of passage into the chronic condition, and change from parenchymatous to interstitial nephritis, are as follows: profound anæmia and lack of color in the integuments; sometimes the urine remains scanty and contains much albumin, with persistence of the anasarca; gastric symptoms appear (anorexia, vomiting, which is often obstinate, frequent and continual diarrhœa); often œdema of the lung and hydrothorax complicate the condition of the patient. Death comes from exhaustion, asphyxia or inflammation of the lungs.

In other cases the progress is slower. The patient may return to a condition of health, doubtless incomplete, but which permits a fairly long survival. The urine becomes more abundant and clearer, always remaining albuminous; anasarca diminishes, and the disease takes upon itself, more or less, the pace and termination of interstitial nephritis.

Prognosis in Interstitial Nephritis.—The prognosis is that of a disease of very long duration, but absolutely incurable. If the patient is subjected to the proper diet, he may live for many years, with every appearance of health. We have already said that he usually falls a victim to uræmic accidents, and the prognostic sign which causes us to fear these accidents is drawn absolutely from the quantity and the quality of the urine. As long as the urine is abundant and not too poor in urea, as long as its density reaches 1012, the physician may rest easy; but as soon as the urine diminishes in quantity, while at the same time urea falls to very small quantities, we must expect to see uræmic symptoms burst forth.

Treatment of Acute Bright's Disease.—In the beginning, when the urine is scanty, bloody and albuminous, when there is pain in the region of the kidneys and general anasarca, the indicated remedies are: Belladonna, Cantharides, Apium virus, Koch's lymph, Iodium.

1. *Belladonna.*—This is the remedy in the beginning. We should give it preference over the other three when fever is present, with headache and vomiting; scanty urine colored red by hæmato-globulin (hæmoglobin) confirms us in its choice.

Dose and Method of Administration: The first three dilutions: Six drops in 200 grammes of water (about seven fluidounces). A teaspoonful every two hours.

2. *Cantharides.*—The symptoms and lesions of acute Bright's disease correspond exactly to the symptoms and lesions produced by

poisoning with Cantharides. The experiments of Galippe put this fact beyond doubt, and in later days Lancereau has held, before the Academy of Medicine, that the best remedy for albuminuria is Cantharides. This is truly scandalous, and reply has been made that Cantharides may be very dangerous in the treatment of albuminuria, since it causes nephritis. It goes without saying that this objection is of no consequence to the disciples of Hahnemann. Cantharides is suitable in the treatment of Bright's disease at all times when the urine, containing albumin and blood in abundance, is passed in small quantity, together with tenesmus. We should administer it after the beginning, when there is no fever, or when Belladonna has reduced the temperature. Cantharides acts very promptly. Its first effect is to cause blood to disappear from the urine and to increase the quantity of urine considerably. It is not unusual to see the urine reach 2, 3 and 4 litres from the first days of the administration of Cantharides.

Dose and Method of Administration: We seldom prescribe the tincture, and then never more than three drops a day of it. We have been most rapidly successful by the use of the first dilutions, administered as in the case of Belladonna.

3. *Apium Virus.*—The poison of the honey-bee, in its action upon acute nephritis, has great analogy to that of Cantharides, but it is more particularly indicated when there is considerable anasarca. In my clinical lessons of 1892 may be found observations on a case of acute Bright's disease, very rapidly helped by the poison of the honey-bee, with a diuresis which exceeded three litres a day. Apium virus lacks at present sufficiently extensive clinical confirmation, but we know enough about this remedy not to hesitate to prescribe it when the indications are present which I have mentioned.

Dose and Method of Administration: I use habitually the three first triturations: twenty centigrammes (about three grains) dissolved in distilled water, taken three times a day. Apis mellifica gives the same results, and is employed in the same doses.

4. *Koch's Lymph.*—Clinical observations and experiments upon animals have shown that injections of Koch's lymph produce parenchymatous nephritis together with albuminous urine. I am not aware of the signs which allow us to determine the indications for the use of this remedy in the acute stage of Bright's disease; therefore I have almost always reserved its use for the chronic period of

this disease, and also for the treatment of interstitial nephritis. We know that in these two cases the lesions of the kidney are established, and that, in consequence, we cannot hope for a radical cure. Whenever we have prescribed Koch's lymph in such cases, we have obtained an amelioration characterized by considerable diminution of albumin and by amelioration of the general health.

Dose and Method of Administration: We have never made hypodermic injections in the treatment of the nephritis. We have confined ourselves to prescribing Koch's lymph in the sixth or third dilution; three doses a day for six days. Cease giving the remedy from one to four days following the effect obtained, then begin again.

5. *Iodium.*—This is a remedy which we shall find suitable to the treatment of interstitial nephritis, but it has also given us very good results in the treatment of Bright's disease, which is still acute. The dose in this case has been one of the first triturations of the Iodide of sodium. The other remedies indicated in the treatment of chronic Bright's disease, or in interstitial nephritis, are Lead, Arsenic, Phosphorus, Mercury, Nitric acid, etc.

If we should wish to enumerate all the drugs which may produce interstitial nephritis, with passage of albumin into the urine, the list would be long; but I do not believe that the physician would derive great benefit from use of them.

Phosphorus, and especially Phosphoric acid, produce the majority of the symptoms of interstitial nephritis. But have they ever cured a single case of this affection?

As to Plumbum, no drug presents a more complete image, not only of interstitial nephritis, but even of general arterio-sclerosis, and yet I have never obtained results from the use of this drug. Possibly I have not administered the preparation in suitable dose. Plumbum should always be studied in connection with the treatment of chronic inflammations of the kidney.

Iodium, and especially the Iodide of sodium, have, in my hands and those of many other physicians, produced a veritable and durable amelioration, not only of the symptoms of arterio-sclerosis, but also of those of interstitial nephritis.

Dose and Method of Administration: We use almost always the three first triturations of the Iodide of sodium. Administered, as we have said, in the case of Apium virus. In rebellious cases, we

have found it well to administer several centigrammes (a centigramme equals about one-sixth of a grain) of the crude drug.

We have not mentioned Fuchsine, nor Methyl blue, nor so many other substances, heralded as panaceas in Bright's disease, which have been forgotten as soon as discovered.

Treatment of Uræmic Accidents.—Sometimes we do not hesitate to prescribe copious bleeding when eclampsia or uræmic coma shows itself in strong patients, and in those who are still in the acute period of the disease.

Moreover, this practice had, and still has, its very earnest advocates for uræmic accidents which show themselves during pregnancy. We do not absolutely condemn its use, but, not understanding entirely its mode of action, we never employ it.

Chloroform, Belladonna, and its succedaneum, Opium, and, lastly, in certain cases, purgatives, indications for which we shall try to determine, constitute the means which we habitually use in the treatment of uræmic accidents.

1. *Chloroform.*—Chloroform is an heroic remedy for attacks of eclampsia, to which it is, moreover, absolutely Homœopathic. It is universally accepted by physicians and accoucheurs.

Dose and Method of Administration: The most energetic method of administering Chloroform consists in giving inhalations so as to produce anæsthesia. Suspend administration of the drug when convulsions have ceased, beginning again when they commence in turn. In practice, Chloroform is often replaced by Chloral, because the presence of a physician is not required for the administration of this latter remedy. It is more convenient to administer it in enemata, in doses of 4 grammes (about 62 grains), in the case of adults. The action of Chloral is slower and also more prolonged than that of Chloroform. Its administration may be renewed whenever the anæsthetic sleep ceases and convulsions begin again.

2. *Belladonna, Æthusa Cynapium.*—These were our two principal remedies before the discovery of Chloroform.

Belladonna and Æthusa are indicated in the eclamptic form of uræmia. Moreover, Belladonna is still indicated during uræmic coma, when the pupil is dilated, the face pale, and the pulse frequent. In the cases in which delirium comes on, then again we must have recourse to Belladonna.

Dose and Method of Administration: The three first decimal di-

lutions, one drop every quarter of an hour, in cases of eclampsia; in other cases, one drop every two hours.

3. *Opium.*—This drug is indicated in uræmic coma, with contracted pupils, red face, pulse full and slow. It is also indicated in uræmic dyspnœa.

Dose and Method of Administration: I prescribe usually the first triturations, twenty centigrammes (about three grains) in a hundred grammes (about three fluidounces) of water. A teaspoonful every two or three hours. In cases in which patients cannot swallow, or swallow with difficulty, I have found it well to inject, by the hypodermic method, Tincture of opium, one in one hundred; that is to say, the first dilution, this dilution being made in distilled water.

In uræmic dyspnœa it is preferable to inject eight or ten drops of a solution of Morphine, one in one hundred, this drug being absolutely Homœopathic to dyspnœa. Injections may be renewed every two or four hours.

Jaborandi and its alkaloid, Pilocarpine, and also tranfusion of blood, have been lauded, but these are agents which are essentially dangerous.

4. *Drastic Purgatives.*—Although treatment by drastic purgatives has nothing Homœopathic about it, and although it is solely a question of their physiological action, which is to withdraw a great quantity of water from the system, we should, nevertheless, not reject them entirely, and in desperate cases, in which standard remedies have been without effect, purgation may lead to a considerable amelioration, especially when uræmic accidents are characterized by coma and very general anasarca.

As a rule, use of purgatives has only a palliative effect, and the amelioration it produces has but slight duration.

Method of Administration: We use usually German brandy, forty grammes (a little over a fluidounce) sweetened with twenty grammes (a little less than a fluidounce) of syrup of Nerprun (Buckthorn).

Diet and Hygienic Precautions in Bright's Disease.—Absolute milk diet is perfection in acute Bright's disease, and also during the outbreaks which come on in the course of the disease, when the nephritis has passed into the chronic state. The patient should take three or four litres (about three or four quarts) of milk a day, in small doses repeated every two hours; the milk may be boiled or not, salted, sweetened or natural.

It is carrying matters to a dangerous extreme to prescribe an absolute milk diet for patients in all stages and in all forms of Bright's disease.

When the patient is better—when his health has, at least, apparently returned—we should advise the mixed milk diet, which consists in the administration of one or two litres of milk diluted in part in the form of soup. We may allow at the same time poultry, ham, fish, and also, a little later, mutton and beef. Eggs may also be allowed albuminuric patients, except during the acute period.

Alcohol should be absolutely forbidden. In the purely chronic period we may, however, permit a little white wine, red wine or cider diluted with water.

Finally, the physician has an accurate thermometer for guiding him in the alimentation of his patients, namely, the condition of the urine. If the urine reached a litre and a half or two litres (three to four pints), if the urea approaches its normal quantity, if albumin is diminishing, we may relax the diet much. But if, on the contrary, the urine diminishes much, while at the same time the specific gravity falls below 1010, and the albumin increases in quantity, it becomes necessary to return to the absolute milk diet.

The patient should keep up the functions of the skin, and consequently its cleanliness, by washing and by hot baths. He should shun damp cold, and, if it is possible, spend the winter in hot countries. He should take moderate exercise, and should shun prolonged muscular efforts.

Hydrotherapy, which has been advised by several physicians, has has not kept good the promises which were made in its name, and I do not venture to advise its use.

Discussion.

Geo. M. Dillow, M.D.: I am sorry that circumstances have so shaped themselves as to make it too difficult for me to attend the Congress and thus to fulfil my provisional promise to comment on Dr. P. Jousset's paper on Bright's disease. My regret is the greater because the importance and ability of the paper should command the highest respect I could offer. I should find it difficult, however, to compress the little that might interest in a ten minutes' speech, for my views differ in many respects from those of the learned author of the paper, and I could not express them satisfactorily even in a much longer space of time. But I wish to offer something which

you can use in part or whole at your pleasure, in case there is no other speaker to fill my place.

Let me say that, as regards the main contention, the present state of knowledge does not appear to me to warrant restriction of the term, Bright's disease, to any one of the recognized forms of nephritis, and that it seems less likely to lead to further confusion if we keep the term, as most generally used, in the generic sense, to cover all forms of primitive renal inflammation which suppress the function of the kidney by destruction of its essential element, viz., the glomerulo-tubular system. By whatever name the process may be called, and wherever beginning, this is the ultimate result of every form of nephritis, and it is to the result, and largely by reason of its gravity, that the term Bright's disease specially applies. One has only to be familiar with many authorities and to follow up diagnosis by post-mortem investigation to realize that schematic descriptions do not so often correspond with the anatomical types predicted and pathological processes predicated. Instead of the so-called typical kidneys, we often find many departures; and if, as histologists, we search them all, we find always inflammatory changes involving all the elements of the cortex, tubules, glomerulus, interstitial structure, and bloodvessels, though present in different degrees, combined in different ways, and associated more or less with degenerative lesions. Whether there are one, two, or more distinct pathological processes involved, or whether there is only one, modified by many ætiological factors, which act in such a way as to determine varying evolution, duration, intensity, extent and degeneration, thus giving rise to a varying symptomatology, I do not feel prepared to say, but, as practical clinicians, it is safer to leave the pathologists to fight out their battle to the finish before we preoccupy our minds with the partisan views of any one of the contending authorities. We cannot say with some that interstitial nephritis only is Bright's disease; or with others, that parenchymatous nephritis only is Bright's disease; or that Bright's disease does not include other intermediate and mixed forms. It is best to regard it as an ensemble of symptoms and lesions, variously combined, differing in evolution, but always presenting a family resemblance in albuminuria and uræmic manifestations, and in glomerular and tubular destruction.

The confusion into which we would be thrown by accepting Dr. Jousset's position is well illustrated by the effects of lead upon the kidneys. Using the term parenchymatous nephritis in its purely pathological sense, we would understand an inflammation where the initial lesions are primarily in the tubal epithelia, which we take to be the parenchyma of the kidney. It is a curious fact that the best established example of this parenchymatous process should be the so-called simple interstitial nephritis of lead-poisoning, which Dr. Jousset rules out of the category of Bright's disease. Charcot and

Gambault have demonstrated that the lesions first observed in animals poisoned by repeated fractional doses of white lead are in the epithelia of Henle's loops, rapidly passing later into the epithelia of the convoluted tubules and of Bowman's capsule. The epithelia swell, flatten through mutual pressure in distended tubules, break down into embryonal (inflammatory) corpuscles; or in other words, proliferate, whence follow atrophy and collapse of the tubes with growth of connective tissue. The large vessels show no lesions. The arterioles, only in the later period, are affected in their outer coat, and the glomerular capillaries remain intact during nearly the whole duration of the experimental disease. Here, then, is a typical parenchymatous inflammation, the lesion of the glandular structure being primary, and the interstitial and vascular lesions being secondary; and yet here also is the purest type of so-called interstitial nephritis, which end in the small, red, granular kidney, and an inflammation which is also claimed to be dependent upon arterio-sclerosis.

Time does not permit me to analyze the author's descriptions of the two types of nephritis presented, which, for so brief a paper, are most admirably, if too rigorously, summarized. I cannot, however, permit the opportunity to pass without expression of dissent from his view of the relations of the cardio-vascular system to both parenchymatous and interstitial nephritis. In his parenchymatous nephritis (I have to say *his* to distinguish it from the parenchymatous nephritis of some other authors), which includes the large and small white kidneys and also the mixed forms of kidneys, common in practice, observation of the heart and arterial tension furnishes clues for diagnosis, prognosis, and treatment not second in value to any other source of information. In his interstitial nephritis, while I recognize that some cases are joined to (*lieé*) generalized arterio-sclerosis, I believe that oftener the two processes run concurrently under the action of a common cause, and that still more often the renal inflammation precedes the general arterio-sclerosis and cardiac hypertrophy, of which it is the inducing factor. Even upon his own statement the balance of experimental evidence is in favor of the production of cardiac hypertrophy (and so presumably high arterial tension) by tying of the renal artery and removal of a kidney, and if we add to his experiments by ligature of the ureter, we find cardiac hypertrophy following the nephritis thereby induced. But, leaving experiment aside, the clinical facts are against his position. High arterial tension and dilatation of the heart are common, even almost constant, in certain stages of acute and chronic parenchymatous nephritis; early hypertrophy even occurs in scarlatinal nephritis occasionally, and the very statistics cited by Dr. Jousset indicate that hypertrophy was *not* exceptional in the cases under examination. His appeal to Bamberger's cases does not sustain his position

of exceptional occurrence. Bamberger's 344 hypertrophied hearts existed in a total of 807 cases of "primitive Bright's disease," "acute," "chronic," and "atrophic;" 207 of these 344 hypertrophies were with "atrophic" kidneys; 122 with "chronic," probably large (parenchymatous) kidneys; and 15 with "acute;" but what proportion the several "acute," "chronic," and "atrophic" cases bore to the whole 807, and in what percentage of each form hypertrophied hearts existed, cannot be inferred. All that we can say is, that 122 hypertrophies argue not exceptional but frequent occurrence; and that, had we the data for reaching a proper estimate, Bamberger's statistics probably would show a proportion approximating one-half cardiac hypertrophies to the whole number of parenchymatous cases. But putting aside the argument from Bamberger as not being conclusive, we find that Dr. Jousset has misconceived Galabin's statistics. Galabin's 101 cases numbered 65 hypertrophied hearts instead of 34, as the author of the paper asserts; 66 of the 101 were granular kidneys, with 53 cardiac hypertrophies; 22 were examples of tubal (parenchymatous) nephritis, of which 11 had cardiac hypertrophy; 13 were waxy kidneys, with 1 hypertrophied heart. Vius showed 14 hypertrophies out of 20 cases of parenchymatous nephritis; Ewald (not cited in the paper), 5 out of 10. Thus, according to the statistics appealed to, fully one-half the cases of chronic parenchymatous nephritis had cardiac hypertrophy. If, now, with this correction, we accept Labadie-Lagrave's assertion that dilatation is the rule in parenchymatous nephritis, we arrive at the conclusion that either dilatation or hypertrophy, or both, obtain more commonly than a heart of normal size in chronic parenchymatous nephritis. This is substantially the conclusion of Lecorché and Salamon. Familiarity with their work makes it difficult for me to conceive how the author of the paper could have so misconceived their meaning as to write that "they plainly exaggerate when they speak of hypertrophy of the heart as a constant lesion in this disease" (parenchymatous nephritis). I have been unable to find anywhere in this book any such assertion, and such exaggeration as there may be is on the side that claims that it is exceptional. What Lecorché and Salamon have stated is exemplified in the following extract from their work (pp. 624, 625):

"In the question of diagnosis, determination of the state of the heart is one of the principal points. In a general way, it can be said that the degree of hypertrophy measures the degree of atrophy of the kidney. When the left ventricle only is increased in size, it can be affirmed that the Bright's disease is old, whatever may be the acute appearances revealed by the actual episode, and that a slow and latent phase of atrophy has preceded the acute attack under observation. Two great categories of Bright's disease can be estab-

lished according to whether or not cardiac hypertrophy is associated with the symptoms of Bright's, whatever may be these symptoms, and, in particular, the physical and chemical character of the urine.

"If the heart is normal, or simply dilated, it is surely a matter of a large kidney, soft, red, mottled or white.

"If a middling (moderate) hypertrophy of the heart exists, the anatomical characters of the kidney are those of one of the forms which we have described under the name of intermediate evolutionary forms, or a small kidney atrophied rapidly by successive attacks close together—this kidney showing the appearance of a red granular kidney, and more often of a white contracted kidney.

"If, finally, the cardiac hypertrophy is enormous, there is no doubt of the small red kidney, contracted by slow and progressive atrophy.

"These rules are true, and ought to guide in the immense majority of cases. But, as with every pathological law, one should not lose sight of exceptions. Cardiac hypertrophy can develop rapidly in the course of acute and subacute nephritis, as has been noted *apropos* of scarlatinal nephritis. In these precocious hypertrophies dilatation outweighs the hypertrophy, properly speaking; but clinically it is not easy to make the distinction, and by relying on observation of the heart, it is easy to deceive one's self upon the duration and real appearance of the renal lesions.

"In the second place, there may be the following *ensemble* of symptoms: considerable hypertrophy of the heart without valvular lesions; generalized atheroma-traces of albumin in the urine, which is pale, poor in urea and solids. Clinically, it is difficult to avoid error. There are the symptoms of the small, contracted kidney by progressive atrophy, and yet the autopsy shows large red kidneys, smooth and of normal appearance. Shall it be said that because the microscope shows a few glomerulic and tubular lesions, that it is Bright's disease? No; we must recognize that the clinician has been deceived, and that it is only a slight nephritis and an albuminuria, which has nothing to do with Bright's disease in an atheromatous subject whose cardiac hypertrophy is explained by generalized arterio-sclerosis, and which has no connection with the state of the kidneys.

"Finally, hypertrophy of the heart may rarely be absent in very pronounced granular atrophy."

The points which I have intended to suggest in discussion have been the following: 1. That the field of Bright's disease is larger than so-called parenchymatous nephritis; 2. That it includes so-called interstitial nephritis; 3. That Bright's disease is more plural than dual or single in its anatomical forms of kidneys; 4. That its fundamental process or processes may be essentially single rather than dual or plural, its evolution and varieties depending upon the ætiological factors at work in the individual case; 5. That interstitial

nephritis is not commonly a late episode of a general arterio-sclerosis; 6. That arterio-sclerosis is itself a result of the nephritic lesions of Bright's disease. 7. That the heart and vascular tension are altered in all the forms of Bright's disease. I should also like to emphasize the thought, which has grown upon me with experience, that behind the cases which we diagnosticate as parenchymatous nephritis, acute or chronic, appearing without assignable cause, there has been a silent, latent period of renal atrophy similar to that demonstrated in experimental lead-poisoning, though not necessarily confined in its causes to lead, syphilis or gout; that there has been, in reality, a disease of long duration, which has been evolving by minor localized attacks of slight nephritis, remitting, renewing, slowly progressing, gradually disabling the kidneys part by part, yet without apparent disturbance of the general health, until, through some new exciting factor or an intensification of some cause previously existing, the remaining healthy portions of the renal parenchyma are extensively invaded by a more intense inflammation, when renal obstruction becomes manifest by circulatory symptoms, often including dropsy, and renal inadequacy shows itself in some of the manifold phenomena of uræmia. In thus suggesting that the so-called interstitial process may oftentimes precede the so-called parenchymatous process, and that the complex results of both processes, either singly or variously combined, is what we call Bright's disease, there is the clinical inference that attentive examination of the urine for renal inadequacy and close observation of the cardio-vascular system should go hand in hand for correct diagnosis in all the forms of the disease.

THE SCIENTIFIC CLINICIAN.

By J. P. Sutherland, M.D., Boston, Mass.

The average meeting of local, or even of national, medical societies is given up, as a rule, and justly and wisely enough, to the discussion of themes of immediately practical interest, and to the relation of personal experience in medical fields. "In a short hour, a short journey," says the proverb. The hours which the busy practitioner can give to friendly meetings for mutual counsel are short indeed, and it is quite natural that the object of the short journeys these short hours make possible should be the reaping of practical hints as to how to meet every-day perplexities. But the present occasion is an exceptional one. "World's Congress" is a phrase of wide promise, and from it the essayist of the hour may take privilege to journey a little afield from the familiar highway of experience toward the virgin forests of theory. This is my excuse for bringing here, where others are unfolding from their rich stores things new and old in the way of clinical experience and of clinical fact, a few crude guesses as to what like should be the clinician himself—the scientific clinician—which, as matters now stand in the medical world, I fear is but another name for the ideal clinician. To pursue the ideal is not, after all, so unpractical an occupation as it at first seems. We may not overtake it, but we may glimpse it, and it is only by glimpses of the ideal that we can be helped to shape the actual to better uses.

What is a clinician? Foster, prince of makers of medical dictionaries, defines the clinician as "one whose observations, inferences, and methods of treatment are based on clinical work, *i.e.*, on experience in the care of living subjects as distinguished from the study of morbid specimens or of the writings of others." A fine, succinct definition this, and one that, but for one fact, might well stand not only for the clinician, generally speaking, but for the scientific clinician, to define whom is the object of this paper. That disqualifying

fact is that Foster's definition says nothing about the *quality* of the clinical work on which the physician founds his "observations, inferences, and methods of treatment." Here is exactly our point of departure. In proportion as that work is done in the true scientific spirit, which is that of broad-minded receptivity guarded by the unsleeping demand for all attainable accuracy; in proportion as that work is done according to scientific methods, which are those of patient, exact, intelligent experimentation, will the work be scientific work, and the clinician a scientific clinician.

No scientific clinician is an empiricist. Every clinician is, to the end of his working days, inevitably and in some sense an empiricist, but he is a scientific clinician exactly in proportion as he recognizes his empiricism and is in the effort to emancipate himself from it. One often finds, among Homœopathists, the idea almost drolly prevalent that an empiricist in medicine means a physician who gives Old-School medicines according to the needs of Old-School experience. In point of fact there are very nearly if not quite as many empiricists among Homœopathists as anywhere else. For an empiricist is not such by virtue of practicing under this or that therapeutic rule or lack of therapeutic rule, but by virtue of accepting and acting on a thing because somebody else has told him it is true, and not because he has seen for himself that it is true and why it is true. It is an unsavory dose for professional vanity to swallow, but it is well for our growth in science for us to remember that the girl who buys cuticura soap because the advertising testimonials in the newspapers tell her it is good for her complexion, is no more an empiricist than the Allopathic physician who gives Morphia for every kind of pain because he has been told it is the proper thing to do, or than the Homœopathist who cheerfully administers inert substances whose potency he has never once tested on himself or for himself because he has read in one of his journals that certain symptoms have been created and are controlled by them. The prevalence of empiricism in the Homœopathic school would make a subject—and a very melancholy subject—for the essayist taken by itself, and where the empiricist reigns the scientific clinician will rarely be. Empiricism, let me again remind you, just means the unreasoning acceptance of hearsay and the acting upon second-hand knowledge. We are, therefore, empiricists, and nothing else, when we take our materia medica, as it stands, on hearsay, and make no effort to satisfy

ourselves, as with a little time and trouble we can quite easily satisfy ourselves, which drugs hold their place there by r'ght of reliable and satisfactory provings, and which are there—and a very great many are there—merely by acceptance of empirical hearsay, and therefore have no right there whatever. The scientific clinician never employs a drug whose pathogenetic power he does not know all about that can be known by personal experimentation if possible; at all events, from evidence so direct, manifold, and solidly convincing that hearsay has no place in it. The acceptance of this rule is the first step taken by the Homœopathist toward becoming a scientific clinician. The administration for the relief, in the sick, of certain symptoms which the drug administered can be proved to cause in the healthy organism—this, and nothing else, is Homœopathy. To administer, to the sick, drugs whose power over the healthy organism is neither known nor demonstrable, is to be neither Homœopathist nor scientific clinician, but an empiricist, pure and simple. A convincing instance of what hold empiricism has upon Homœopathy is the prevalence, in so-called Homœopathic practice, of what is known as Schüsslerism. The Schüssler remedies beyond, in a few instances bearing the names of drugs known to our materia medica, and being recommended for administration in small doses, have no more in common with Homœopathic treatment than have "safe" kidney cures and "infallible" spring tonics. One would suppose this fact would be recognizable at a glance; yet so widespread and insidious is the influence of empiricism that there are Homœopathists the conntry over who employ the Schüssler remedies in absolute ignorance of their pathogenetic power or if they possess any such. Such possibilities must cease to exist before we can hope to become a school of scientific clinicians.

To accept nothing on hearsay, to investigate personally when personal investigation is possible, and in any case to demand evidence of a thoroughly reliable sort before acting in any given direction, that is the first qualification, that is the very hall-mark of the scientific clinicism. For the rest, he must be a trained observer, a logical reasoner, an unbiassed thinker, a truth-seeker of such high calibre that no theory, however cherished, will be respected by him when he finds it opposed by demonstrable fact.

He must be a trained observer. In our craft, as elsewhere, there are certain inborn aptitudes the possession of which is invaluable to

the craftsmen, as helping him toward the ideals of his work. Keenness of the natural senses is a fortunate possession for the clinician. Smell, touch, sight, hearing, taste—these in the clinician, who must be an acute diagnostician, should be as carefully trained, as instantly, involuntarily serviceable, as they are in the woodsman and the plainsman. Listen to Milner Fothergill, whose inspired common-sense every student of medicine would do well to profit by. "When a patient comes, the first thing to do is to look at him. Some varieties of information may be safely left in the library, and it is quite enough for the busy practitioner to know where to find it when he wants it; but there is other information which is required several times every day. The more the eye learns to see, the more it can see and will see. There is nothing worth knowing that is got without trouble. So is it with the education of the eye. The education of the eye is most important to a medical man; it cannot be forgotten or mislaid like an instrument; it is of incalculable value when the patient is unconscious or deaf, or a foreigner whose language the doctor does not know. A scar at the corner of the mouth will reveal the secret of malnutrition in a child who has hitherto resisted all remedial measures; a little puffiness under the lower eyelid may indicate the chronic Bright's disease underlying the bronchitis for which the doctor is consulted; the hue of the skin will very often furnish the clue to the malarial neuralgia which is very troublesome; a tortuous, visibly pulsating temporal artery will tell in all but articulate language of the gouty heart and its associated conditions. These are a few instances of what the eye can do in the way of diagnosis." What the trained ear can do, especially in cases of pulmonary and cardiac diseases, to aid accurate diagnosis needs no dwelling upon. Touch has acquired infinite significance, since we have learned what accurate diagnoses, even in complicated cases, can be made by the exquisitely trained and sensitive touch of the totally blind. "When the sense of smell is sufficiently developed"—to again quote Fothergill—"it is of definite aid to the diagnostician. In the exanthemata a certain animal odor, often amounting to a positive stench, is emitted. Certain lunatics and, markedly, general paralytics, possess a very disagreeable odor. In pyæmia the breath carries with it a characteristic smell, described as that of hay or earth."

These few examples instance how invaluable special training of

the natural senses may be to the scientific clinician in his capacity of diagnostician. That he must be expert as a diagnostician should go without saying. It may be true that the Homœopathic clinician is safe in selecting the same drug to meet the same symptoms, from however widely different diseased conditions the symptoms may have rise. But it is certainly true that the hygienic and, above all, the dietetic treatment prescribed must, to be efficient, vary widely with the pathological condition for which it is prescribed, and exact apprehension of which is therefore a prime requisite of the scientific clinician.

Again, he must be a logical reasoner. Without the power of reasoning logically, closely, clearly, the physician may be an exceedingly popular and successful practitioner, but he can never be a scientific clinician. One infallible sign of the clinician who is a logical reasoner is the infrequency with which the word "cure" is heard upon his lips. He may and will speak often and gratefully of recoveries, but only in rare instances refer to them as "cures." The reverent saying of the great surgeon—"I dressed his wound, and God healed the man"—represents the habitual attitude of the logical thinker toward the recoveries that take place under his treatment. "I gave the drug, and the man was healed;" that is the utmost he will often venture to say. Data alike concerning the origin and natural course of disease and the power of drugs over diseased conditions are far too scant, far too unreliable for us to pronounce from them, in most cases, what power was instrumental in a patient's recovery. We know in how many cases of acute and infectious diseases the tendency is toward spontaneous recovery entirely without medical assistance—measles, for instance, croup, pneumonia, typhoid fever. We know how many diseases, distinctly malignant, will most certainly cause death in the patients who are their prey, in spite of every known medical resource—phthisis, diabetes, locomotor ataxia, sarcoma, tubercular meningitis. Knowing these things, surely the scientific clinician will content himself with adding, so far as he can, from the fruits of his conscientious and impartial observation, to the data from which, in the far future, reliable deductions may be made as to the power of drugs over diseases, but will modestly realize, meantime, that the only class of cases to-day from which such deductions can be safely made are cases—like those of skin disease or of neurasthenia—which are known to be benign, and yet, without medical interference, to persist indefinitely, apparently insus-

ceptible of spontaneous cure. He will study unweariedly, not only in man but in the lower animals—where frequent spontaneous recovery from illness furnishes such suggestive instances of the power of the *vis medicatrix naturæ*—the phenomena of disease, recovery and cure. He will learn to look upon the patient under his care as a unit made up of many complexities—a creature made up of body, mind and will—and who can only be successfully treated by the physician who has at command not only the drugs that act upon the body, but the resources of those mental and psychological therapeutics whose potency for the "mind diseased" is every day more intelligently recognized.

Finally, the scientific clinician will, with every year of experience of its value and its usefulness, lean more and more thankfully, as time goes on, upon the guiding law of Homœopathy. To know the exact pathogenetic scope of drugs; to choose, with sensitive discrimination, the closest similimum to the diseased condition presenting; to administer this drug with full realization how potent and beneficent is the *milde macht;* this to do is to follow the only channel through which, among the hundred shifting currents of medical empiricism, among the dangerous shoals and quicksands of medical commercialism, one may reasonably hope to steer to the harbor of safety and success.

Action from first-hand experience and not from hearsay; logical reasoning; acute and trained observation; the modesty which hesitates as long to say "I cured," in event of a patient's recovery, as in event of a patient's death it would hesitate to say "I killed;" wide sympathy; mastership of many resources; such consistent adherence to the strict principles of Homœopathy as forbids experiment upon the human body in disease with any substance whose effects upon the human body in health are not thoroughly demonstrated and forever demonstrable; these are the signs by which men may know the scientific clinician. They may or may not mark the successful practitioner, since what pleases the patient is not infrequently preferred over what helps the patient. But they will mark the honorable practitioner, and perhaps, in the long last, that is best.

Discussion.

George B. Peck, M.D.: The paper to which we have just listened in its entirety, and with the signification the author in its closing paragraphs clearly indicates his intention to convey, is entitled

to our unqualified approval. It accurately delineates that ideal whose realization should be our constant endeavor. And yet his discussion of empiricism is so confusing and indeed so contradictory I fear much of the good that otherwise might have been secured to the junior members of the profession has been lost.

Webster tells us that an empiric is one whose knowledge is founded exclusively on personal experience, and that any procedure is empirical that is unwarranted by science. But the essayist declares that the "empiricist is *not such* by virtue of prescribing under this or that therapeutic rule, *or lack of therapeutic rule;* but by virtue of accepting and acting on a thing because somebody else has told him it is true, and *not because he has seen for himself that it is true and why it is true;* that the girl who buys cuticura soap because the advertising testimonials in the newspapers tells her it is good for her complexion, is no more an empiricist than the Homœopathist who cheerfully administers inert substances whose potency he has never once tested on himself or for himself because he has read in one of his journals that symptoms have been created and are controlled by them; and, finally, that we are empiricists and nothing else when we take our materia medica as it stands on hearsay." He further states that "the scientific clinician never employs a drug whose pathogenetic power he does not know all about that can be known." Then the scientific clinician must content himself with a contemptibly small number of remedies or be the fortunate possessor of an unrivalled intellect.

Who knows all that can be known on any subject or anything? What science, what knowledge does not depend on statements by others that it is impossible for us to verify in any particular? Do we, therefore, discard the one and dispute the other? Establish the integrity and the opportunity for knowing of a witness and you *must* accept his testimony. That sort of evidence which might send you or me to the electric chair upon occasion is good enough to risk our own lives and the lives of our patients upon. At all events, it is the only kind of evidence you ever will or ever can obtain. Nothing has impressed me more in scanning the pages of Allen's *Cyclopædia* than the number of symptoms of unquestioned value that have been noted only by single provers, though a dozen or more tested the drug. He is *no empiric* but a *strict scientist* who administers Lycopodium or any other so-called inert substance properly attenuated for the removal of a group of symptoms alleged to have been produced by that substance, even though only upon a single creditable experimenter, whether the statement is to be found only in the *Cyclopædia of Drug Pathogenesy,* Allen's *Cyclopædia,* or the last issue of some magazine, for it is based upon an unchanging and unalterable law of nature and not upon a fickle whim of the prescriber.

The essayist states that "data alike concerning the origin and

natural course of disease, and the power of drugs over diseased conditions, are far too scant, far too unreliable for us to pronounce from them in most cases what power was instrumental in a patient's recovery." I dissent emphatically from that proposition. While no honorable practitioner will boast of his cures through the restraints alike of modesty and dignity, if a man does not know *in most cases*, I had almost said in all, whether he cures or fails to cure, he lacks the first essential of the physician—sound judgment—and is therefore unfit for that vocation.

In conclusion I wish to quote, with my hearty endorsement, the statements that the scientific clinician "must be a trained observer, a logical reasoner, an unbiassed thinker, a truth-seeker of such high calibre that no theory, however cherished, will be respected by him when he finds it opposed by demonstrable fact, and that he will with every year of experience of its value and usefulness lean more and more thankfully as time goes on upon the guiding law of Homœopathy!"

BILIOUSNESS.

By F. H. Orme, M.D., Atlanta, Ga.

There is probably no term designed to express an abnormal condition, that greets the eye or the ear of the physician more frequently than does the vague and nondescript one of multifarious signification; "biliousness." Like the ubiquitous "cold," which is said to have been "taken," it is the cause of, or is combined with, a large portion of the extensive list of ailments which afflict humanity. It answers, or is expected to answer, as a description of indefinite states induced by unavoidable or avoidable causes. Its only synonym would be *indefinableness.*

The debauchee ascribes to this unknowable influence his post-prandial or post-bacchanal troubles; the overworked business man finds in it the explanation of his ill-feeling; the traveller who has been exposed to noxious miasmata has feelings which he must use the word "bilious" to express; while the general feeling of *malaise* attending the incipient stage of so many acute or chronic affections comes under that all-comprehending expression.

When analyzed, what does "biliousness" mean? Who could answer this without writing a book? It means, in part, according to the various conditions to which it is applied, a "bad" feeling, a "mean" feeling, a "sluggish" feeling, a "sickish" feeling, "qualmishness," "*ane ne sais quoi*," "indefinable," "don't-know-what-to-call-it" feeling. As to the extent to which bile has anything to do with it, of course our patients cannot know this, and it must be confessed that often we have little the advantage of them in this respect. It is a semi-technical term in popular and in professional nomenclature, as often signifying a deficient as an excessive action of the liver, and the patient in this sad condition, whatever it may be, usually pleads for something to "touch up the liver," when, perhaps, that much-accused and much-abused organ, the largest and best-able-to-take-care-of-itself gland in the body, is all the while overworked and innocent of any peccancy!

An organ whose usual function, in the average man, is to secrete about forty ounces of bile in twenty-four hours, may well vary a few ounces in a day within normal limits, and it is rarely that there is really excessive variation in the amount of secretion, one way or another, in those cases which are with much emphasis denominated "bilious." The throwing up of a tablespoonful of bile, which, mingled with the fluids of the stomach, seems like a gill, is considered proof of biliousness, while in truth, instead of proving excessive secretion, it is only evidence that this important digestive or emulsifying fluid is taking the wrong direction—by regurgitation—and is wasted.

Given a case of ordinary flow of bile, with a reversed action of duodenum and stomach, half an ounce or an ounce can easily be caught from the current that actively flows from the *ductus communis choledochus*. Yet what serious importance is sometimes ascribed to this! A seasick person is often a good illustration of the really slight significance of the ejection of a little bile. Active emesis, from almost any cause, is liable to furnish this fluid in abundance.

Icteroid conditions are spoken of as "bilious," with more of reason, indeed; for there is in jaundice an excess of bile in the system, although not necessarily an excess of secretion. An obstruction of the main bile-duct by calculi will certainly cause a surcharging of the system with absorbed bile; but this appears to be of itself of little disadvantage—at least, illness does not seem to be in proportion to the extent of this; for after the absorption of bile has been discontinued, it is often long before the deposit, at least of the pigment, can be eliminated, even after a fair degree of health has been recovered. A considerable amount of bile-pigment in the skin seems to be not incompatible with medium health. Such conditions are, of course, abnormal, and are concomitant, at times, with serious functional disorder, but do not necessarily produce, and are not attended by, the feelings or conditions described as "biliousness."

The bitter taste in the mouth which causes some to think themselves bilious may be due to the taurocholic acid of the bile, which is intensely bitter, in the blood, or in the secretions of the mouth (the bile pigments are tasteless), but it may also be due to hallucination of the nerve of taste at times, instead of the bile acids. As we have hallucination of the sense of sight in the phenomena of *muscæ volitantes*, and of the sense of hearing in the way of *tinnitus*

aurium, and of the sense of touch or general sensation as in *formication*, so we may have hallucination of the sense of taste in the form of acid, sweet, salty, bitter or other taste, when the secretions of the mouth would be void of any such actual conditions. This bitter taste is often found in connection with a clean tongue, while a foul or coated tongue, with bad taste and pasty feeling, is regarded as one of the most usual indications of biliousness.

The most customary feelings of one calling himself bilious, beside that just mentioned, are probably those of sluggishness, especially of the bowels, with fulness of or pain in the head; loss of appetite and of spirits; indisposition to exertion at labor or amusement—suggesting loss of proper functional action of the system generally—which is what biliousness most commonly means. This is the feeling that seems, in the amateur fancy, to call for a "touching up of the liver," and by this touching up is meant a general stimulation of the whole digestive system, including the secretions of the alimentary canal.

From this state of impairment of function and general sluggishness the system sometimes spontaneously reacts, often with excessive secretion and increased peristaltic action of the intestines, which is at times followed by an improved condition of the feelings. It is, doubtless, from this hint that grew the general practice, carried to an extreme, of using purgative medicines for this biliousness. That benefit has sometimes followed a judicious course of this sort can scarcely be denied, and that there has been an abuse of it in practice does not argue against the idea that a properly directed physiological stimulation of organs perhaps in a state of passive congestion or inertia may at times be of advantage. A stupid fallacy it is, however, which gives delight to many when they see a free flow of bile as a result of the hobby dose of calomel, as though bile was produced to be wasted in this manner!

Various indeed are the causes assigned, justly or fancifully, for the state—the concurrent of so many diseases—called biliousness. Malaria—whatever that may mean—comes in as a principal factor. Indigestion is a prolific cause. Pregnancy gives a rich assortment of "bilious" symptoms. Whiskey and tobacco and their congeners are exceedingly active. Beer and similar disturbing drinkables follow closely. The *bon vivant* who has indulged late at night in too much lobster salad, brandy, cigars, etc., is apt to report himself to his physician in the morning as "bilious." Depression of spirits

from frustrated plans in love, war or business, or other serious disappointments are very bilious in their effects. Of course, traumatism, orificial troubles, uric acid in the blood, or some serious renal, nervous or cerebral difficulty may be the basis of some of these feelings.

Fancies are numerous as to what has bilious tendencies, often from the fact that the condemned articles were at some time taken inopportunely or in excessive quantity. Even the most innocent of foods, milk, is charged with a bilious effect, and idiosyncrasies at times render every edible and potable article "bilious." Whatever may chance to derange the stomach at some time is accused of exciting this abhorred condition, and people who are imprudent in eating and drinking are, as a rule, most subject to "bilious attacks." Improved sanitation and hygiene would prevent many such cases.

As an illustration of the strange use sometimes made of the term "biliousness," may be given the case of a small boy who had several severe "bilious" attacks during twenty-four hours, violent vomiting coming on suddenly, with bile, and as suddenly subsiding. No other cause being apparent to the family, of course it was "biliousness." On the second day, after an unusually severe paroxysm of vomiting, beside some bile and some blood, which fell upon the towel over his chest, appeared—what astonished the writer as well as the mother of the child—a carpet tack!

Biliousness, so called, is the result of almost every conceivable indiscretion, and is really synonymous with "sickness" in a large class of cases, so that those who prescribe for a name with a hobby remedy will have a varied if unsuccessful experience.

What bushels of compound cathartic pills; what tons of Mercury, in the shape of Blue mass, Calomel, etc.; what cargoes of advertised vegetable and antibilious pills; and what oceans of opening draughts have been used in contending with this most general complaint—biliousness. What slight ailments have been made serious, what millions of teeth have been loosened, what lives have been destroyed by this indiscriminate "doctoring" for this vague and undefined condition?

Well indeed, is it, that Homœopathy has come in vogue to change, at least to some degree, this vicious system. The milder method, with the specialization of cases, has done much toward breaking up

the random, haphazard plan of scouring the interior—"cleansing the *primæ viæ*," as our Old-School friends have had it—*ad nauseam*, and still there is much to do in this direction. Routinism is still the evil of the day; individualization, a special feature in Homœopathic practice, is the method of the advanced school and of the future. Let us avoid the empirical snare of hobbyism and follow the index of scientific specialization; so shall we succeed in dealing with even this protean disorder—*biliousness*.

THE CURATIVE ACTION OF HOMŒOPATHIC REMEDIES IN CASES OF ORGANIC DISEASE OF THE HEART.

By John H. Clarke, M.D., London, England.

The common notion that disease of the heart is incurable should be in every way discountenanced by Homœopathists. Many forms of heart disease are completely curable, and the sooner the popular ideas on the subject are corrected, the better it will be for those who suffer from any kind of heart affection. It is true that old-established valvular disease cannot be altered, destroyed valves cannot be restored, but even in these cases much may be done by remedies to restore the power of the heart when it is defective, and to bring about proper compensation, which is practically a cure. In recent cases of valve affection it has frequently been my lot to observe the disappearance of all signs of disease under treatment. In my book on *Rheumatism* I have mentioned, among others, a case of this kind which particularly struck me when I was resident medical officer at the London Homœopathic Hospital. It was that of a young girl who had a severe attack of acute rheumatism, with both pericarditis and endocarditis. Under treatment, the friction sounds of the pericardial inflammation quite disappeared, and when these had gone the bruits indicating endocardial mischief also subsided.

One of the chief difficulties in the treatment of endocarditis occurring in connection with rheumatic fever lies in the fact that there are so few symptoms indicating the mischief. Pericarditis has generally abundance of symptoms, hence it is a much easier matter to cure cases of this. On the other hand, there may be very extensive endocarditis and no sign be given except on physical examination. In such cases the only thing to be done is to take the totality of the symptoms and to prescribe accordingly. If there are no symptoms elsewhere to guide, such medicines as have been found in practice or in provings to have an affinity for the lining membrane of the heart

and arteries should be thought of, when the constitution of the patient and his previous medical history, with any former symptoms he may have had, will serve to distinguish the most similar.

CASE I.—Quite recently a little girl, aged 5, came under my care in the Homœopathic Hospital suffering from rheumatic fever, affecting a number of joints, and complaining of pain in her chest. I found extensive effusion into the pericardium, and a marked mitral systolic bruit as well. She had received *Chelidonium* and afterwards *Aconite* before I saw her, but without benefit. There was great irritability of temper, white tongue, heavy perspirations, and marked nightly aggravation of the symptoms, causing her to scream the greater part of the night. I prescribed *Merc. viv.* 12, and the symptoms at once abated. The temperature fell to normal, the effusion disappeared, and in a few days the patient was convalescent. However, the bruit persisted. But there were no symptoms whatever. The child was, in all other respects, perfectly well. As her feet were somewhat cold and clammy, I prescribed *Calc. c.*, but I could not trace any effect on the valve to this; and as the patient had to leave the hospital I was unable to follow the case further. Compensation, however, was fully established before she left.

During last summer a number of cases of endocarditis came under my observation in connection with acute fevers. There was at the time an extensive epidemic of German measles, and the first case I shall describe is that of a young lady aged nineteen who was one of its victims.

CASE II.—On June 15, 1892, I called to see Miss L., who had been somewhat ill for four days. I found the rash of German measles, sore throat, the right tonsil being enlarged. There was a cough, and she raised a good deal of phlegm. There was some fever. The monthly period was on at the time. The pulse was 72. On listening to the heart I found a systolic mitral bruit. She had cold, clammy feet. Under Belladonna 30 the symptoms of the fever left her, but the bruit remained. On the 22d June the bruit was audible in the mitral, tricuspid and left auricular areas when she was lying down, but disappeared when she sat up. There was slight giddiness when walking and she was tired in sitting up. I gave her Spigelia 30, and in a few days the bruit became less distinct. She afterwards received *Nat. mur.* and then *Arsen.* for other indications; but on June 29th, after a restless night, hot and perspiring, the pulse

was 84, the mitral bruit was very distinct, and heard in all the areas of the heart, and the patient felt "queer," so I again gave Spigelia 30. Two days after this I found her feeling much better, and I could not hear the bruit. A few days later I listened again, but could hear nothing of it, so I let her leave town for the seaside.

Case III.—About the same time I was attending another German measles patient, also a young lady, who developed in the course of it a similar affection of the mitral valve. Eventually this also disappeared, but as this case was more complicated, the attack having supervened on a long period of over-work and mental strain, much longer time was required. The medicine which had most effect on the heart symptoms in this case, was *Baryta carb.*, which was given in two-grain doses of the 3x. The sensations she complained of were a strained feeling referred to the base of the heart and a sharp pain about the apex. The 3x appeared to have more decided action in this case than the 30th which was given first.

Case IV.—Charlie W., aged 10, had an attack of English measles in May, 1892. I saw him on the 28th, and all the classical symptoms of the disease were present, and in addition, a mitral systolic bruit. There were no symptoms arising from the latter, and I treated the case according to the symptoms in the ordinary way. Under *Bell.* 30, *Merc. sol.* 30, and *Sulph.* 30, the disease ran a mild course, leaving the boy well, except for the bruit. On May 7th, as there were no symptoms, I put him on *Lycopus virginicus* 1x, which has a reputation in valvular disease. I could trace no effect to this, nor to *Spongia* 30, with which I followed it. On 17th of May, taking into consideration that he came of a consumptive family on one side of the house, and guided by the crenated appearance of his teeth, which Dr. Burnett has shown is an indication for the medicine, I gave one dose of Tuberculinum (Heath) 200, and as he had cold, clammy feet, I followed this with *Calc. carb.* Under this treatment he made good progress, and on the 10th of June I ceased attending. The bruit was then inaudible when he stood up but could be heard if he lay down.

On December 14th I saw him again for something else, and had the opportunity of examining the heart. He told me he had no shortness of breath on running up stairs, and he could run as well as ever he could. The apex beat was felt in the fifth space, further to the left than normal, and the area of cardiac dulness was greater

than normal. On standing, no bruit was audible; there was a little accentuation of the first sound at the apex, and of the second over the pulmonary artery. On making him lie down I found that the bruit reappeared in all the areas, loudest over the apex, and the action of the heart became irregular. I have not been able satisfactorily to account to myself for this condition in which there is competence of the valve in the erect, and incompetence in the recumbent position, but it is a condition I have often observed. In one case, that of a child who had at one time unmistakable mitral incompetence with attacks of violent palpitation and flushing of eyes and face following whooping-cough, I found, after some years, that the bruit could only be heard when she lay down; and still later it could not be heard at all. There was no anæmia in this case. Some defect of the posterior flap of the valve, or irregular action of the columnæ cardiæ may possibly account for it.

Case V.—On the 22d June, 1880, James T., a chimney-sweep, aged 44, came to my hospital clinic on the recommendation of a private patient of mine who had persuaded him to try Homœopathy. When he entered my out-patient's room it was easy to see he was exceedingly ill. Like most of his class he had led a hard, reckless life. He commenced chimney-sweeping as a tiny boy in the days when boys were sent up the flues instead of the machine-brushes now used. Naturally, he was a man of powerful physique; but now it had been with the greatest difficulty that he had succeeded in reaching the hospital. He had the blurred, heavy look of countenance—a sort of indistinctness of features—often noticed in sufferers from heart-disease. He felt just as ill as he looked, for he afterwards told me that he never expected to reach home again alive.

Fourteen days before, he had taken cold from getting wet during a trip to Oxford on the river. This was followed by a cough with raising of thick phlegm, the cough being so painful that he had to hold himself, and this had continued. The chief thing he now complained of was a pain at the heart as if it were swelling up. The pain gradually moved down, and the night before his visit to me was in the left flank; then it moved up to the heart again. Sensation as if a big knife went through it, aggravated on taking a breath. The pain prevented him from sleeping; it was impossible for him to lie on the left side. Tongue white; appetite good, but he could not eat, because eating brought on the pain. Bowels confined, he had

a choking sensation in the epigastrium, and a dizziness in the eyes. He was excitable.

On examining the heart I found there was increase in size, a pericardial rub, and bruits in aortic and mitral areas; that is to say, there was pericarditis with effusion and endocarditis as well.

The knife-like pain in the heart singled out *Spigelia* from all the other medicines related to his condition, so I gave it him in the 3d centesimal dilution, a dose every hour.

He slept well that night, as he was able to breathe better. The next day I called at his house, and I found a decrease in the pericardial rubbing sound, and a diminution in the area of cardiac dulness.

June 24th.—Still better; sleeps well; has no pain; appetite good. On this day I made the following note of the state of the heart:

Slight rub heard over centre of heart.

Mitral area: double bruit, the systolic portion being heard in the axilla.

Tricuspid area (right border of sternum on level of fourth rib); a double rough, grating sound.

Aortic area: a double bruit.

On the night of the 25th–26th (as his wife informed me) his breathing seemed to be arrested; it began again with a gasp.

The Spigelia 3 was continued all this time, though it was not given so frequently as at first. From the 25th it was given every two hours.

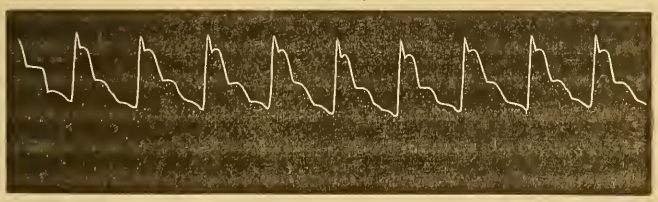
A few weeks after this he mentioned a circumstance which occurred during the time he was taking Spigelia—the loss of a pain in the right knee which had troubled him for eighteen months. If he knelt on it he was unable to get up without going down on the other knee as well, and then stretching out the right leg. The pain was as if the knee got out of joint. He had been sometimes for hours at night before he could get it into the right position in bed. He asked me if my medicine could have had anything to do with its disappearance; for as he had not told me anything about it before, he did not see how I could have cured it. On referring to Allen, I found this in italics: *Tearing pain, like a sprain, in the knee-cap, only when walking, so that at times he limped, since he could not bend the knee as usual.* Other similar symptoms refer to the right knee and both knees. That the *Spigelia* must have the credit of this bye-cure I proved later on, for the pain in the knee returned; but a few doses of the *Spigelia* 1m F. C. permanently removed it.

But to go back. By July 1st he was quite free from any chest symptoms: he could lie on either side. But he was weak in the calves, had giddiness, and suffered from constipation with straining. *Nux* 1m relieved the latter condition.

On July 3d he was still complaining of weakness in the legs; so I put him on *Baryta. c.* 1m, after which there was rapid improvement. He continued on this medicine, with a rest, till August 10th. Occasionally he had palpitation on lying down at night; on the 5th there was slight pain in lower part of left chest; on the 12th numbness of left shoulder and arm. On August 1st he had an attack of giddiness in the evening whilst walking in the street. He resumed work on the 9th of August. On October 11th he declared he felt as well as ever he did in his life. Being an enthusiastic member of the volunteer force, he had been testing his powers by practicing ball-firing. The following Easter he went through the fatigues and exposure of the Easter Volunteer manœuvres, indulging himself even (without asking my permission, I need hardly say) in bathing in the cold spring sea.

On the 19th of March, 1893, I called upon him to make an examination of his present condition. For the last eighteen months he has been better, he says, than for years before. His pulse was 72, regular, steady and of good force. I append his sphygmogram, taken from the left radial, standing, with a pressure of $3\frac{1}{2}$ ounces. It does not differ from a normal tracing except, perhaps, in the strength and sharpness of the upstroke and sudden though quickly-arrested return.

Fig. 1.



The area of dulness is still greater than normal; the apex beat is felt in the sixth interspace and more to the left than normal. Coming to the heart sounds, I found, of course, no pericardial rub. Also the mitral bruit and the grating sound (probably pericardial) in the tricuspid area were no longer to be heard. The double aortic

bruit still remains. In the tricuspid area the first sound is clear, and a soft bruit replaces the second. This is probably the aortic diastolic propagated downwards. In the mitral area the first sound is somewhat impure—not the clear, sharp click of a normal valve—but there is no bruit, showing that the valve is competent.

In this case I conclude that under the treatment—that is, under the action of *Spigelia* and *Baryta carb.* chiefly—the inflammation of the heart, which affected both the outer and inner lining, was subdued, and the affection of the mitral valve was so far remedied that it has been restored to competence. The aortic valves remain still as they were, but the softness of the systolic portion of the double bruit shows that the degree of obstruction to the blood-flow is but slight, and the softness of the diastolic part that the regurgitation is not considerable. This shows that there has been, at any rate, an arrest of the disease process, and I am disposed to think that the aortic trouble dates from before the time when I saw him. I may say that after having been a very heavy drinker, he suddenly gave up alcohol in all forms seven years before this illness began. What made him give it up was that he lost nerve when at his work on roofs, and even on stepping from a curbstone into the street felt as if he would fall. Afterwards he suffered much from "indigestion," and in the night violent palpitation and sometimes arrest of breathing, as noticed by his wife. Loss of nerve is a very common symptom in heart affections, and the probability is that the aortic disease was commencing at that time.

Before leaving the acute cases I would like to refer to a case of ulcerative endocarditis following pneumonia, with delirium tremens, which I published in the November number of *The Homœopathic World* for 1884 (vol. xix., p. 497). The case ended fatally, but the point I wish to refer to was made evident at the *post-mortem* examination. The heart weighed thirteen ounces. On the under surface of the aortic valves (which were competent) grew abundant granulations like cauliflower excrescences, exuding purulent matter. These granulations pressed against the aortic segment of the mitral valve, constricting the orifice artificially. The mitral valve itself was healthy, except that the appearance of an old deposit was found between its laminæ. There were no signs of the heart being affected during his first rheumatic attack, but that there had been inflammation of the valve which had healed without causing deformity, the appearance of this specimen clearly showed.

I will now pass on to speak of chronic cases:

At the Annual Homœopathic Congress, held in London in September, 1884, I read a paper, which was afterwards published in a small volume, entitled *Iodide of Arsenic in Organic Disease of the Heart. Iodide of arsenic* is a drug that has received no extensive proving, and my prescription of it in the series of cases I narrated was, to a certain extent, based on general considerations. Since that time I have had many opportunities of repeating the observations I then made, especially in cases where pulmonary or bronchial affections complicate heart disease. In one case of chronic tobacco-heart it was the remedy that gave most relief. It seems to act when the symptoms of either of its elements are present, but I cannot give any markedly characteristic symptoms that indicate it in preference to other drugs. The accompaniment of cough with expectoration sometimes difficult to raise, and sense of oppression at the chest complicating valvular disease, are perhaps the leading indications, but pain at the heart, breathlessness on movement, faintness, and nervousness, occurring independently of cough, are also relieved by the *Iodide.* In all cases of overburdened or overbalanced heart the drug should be thought of.

But, as I mentioned in my paper, there are numbers of cases which are not perceptibly influenced by the *Iodide.* Homœopathy has no specifics for diseases, hence a strict attention to symptomatology is our only safe rule in this as in all departments of our art.

Case VI.—It is notable how frequently cardiac patients complain more than anything else of indigestion. It was the principal thing the patient, James T., complained of before the attack which brought him under my care. It was the chief trouble in two of the cases still to be mentioned. In the case I am now going to relate, that of Mrs. W., an octogenarian, the strictest attention to dietetic rules was absolutely necessary to keep her in comfort.

This patient had survived a number of illnesses, including a right-side pleurisy many years before, which had left her with a shrunken lung and curved spine and a displacement of the heart to the right. The heart was greatly hypertrophied, and there were murmurs to be heard at every orifice, a double aortic, loud systolic at mitral and tricuspid. The heart's action was very irregular, the arteries hard and tortuous.

I attended her through a variety of illnesses, diphtheritic sore

throat, bronchitis on various occasions, influenza with bronchitis, minor urinary troubles and psoriasis. The condition of the heart dominated everything. There was great swelling of the feet, which varied in degree at different times. But her chief trouble was indigestion and flatulence; the smallest transgression was pretty sure to be visited by an "attack" in the early hours of the morning. The "attack" was a feeling of faintness, a sensation that she was "going," violent pain at times in the region of the heart's apex, great oppression, the symptoms being relieved after a greater or less time by a copious flow of colorless urine. Every time I was called to her in one of these attacks she thought she was dying, and was almost angry with me because I refused to confirm her prognosis and pronounce the *viaticum*.

Aurum metallicum in the 30th or 1m gave prompt relief to this feeling of impending death and kept her reconciled to life for long periods at a time. *Kali carb.* in the same potencies gave her great help when the attacks came on between 2 and 5 A.M., and when there was a cough with aggravation at those hours. After an attack, when there was much palpitation and breathlessness with heart discomfort, *Baryt. carb.* 5 and 30, gave much relief. On occasional courses of these medicines she was kept in tolerable health for long periods. When I first began to treat her I gave the *Iodide of arsenic* with some benefit; but it was not nearly so marked as that from the more definitely indicated remedies in higher powers. *Aurum* 1m (Boericke & Tafel, or F. C.), had the most prompt action when the sensation of impending death was marked.

I will place beside this case another of extensively damaged heart in an aged patient, in which there were practically no symptoms referable to the heart itself, and consequently no call for special treatment.

CASE VII.—A stalwart octogenarian, Andrew M., came to my out-patient clinic at the Homœopathic hospital in the summer of 1882, complaining of rheumatic pains in various parts of him. Two years before he had been laid up for five weeks with rheumatic fever, and for a short time after that he had been troubled with shortness of breath on going up stairs, but had got over that, and had not been troubled with any heart symptoms since. His irregular pulse, sharp and hard, and hard tortuous arteries at once told me that damage had been done. Here are two of his sphygmograms:

Fig. 2.

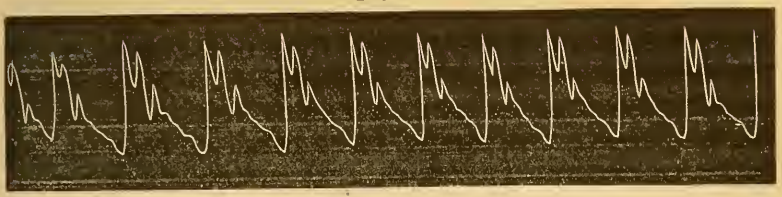
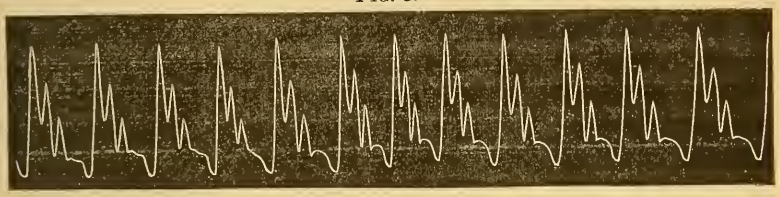


Fig. 3.



Examination of the heart showed the following:

There was visible pulsation in the carotids, the apex beat was in the fifth interspace, $3\frac{1}{2}$ inches to the left of the sternum, and the transverse dulness extended from $\frac{1}{4}$ inch on the right of the sternum 4 inches to the left. Vertical dulness began at the lower border of the third rib. No bruits were audible, but there was at the apex the peculiar thumping first sound which indicates mitral stenosis, this being followed by a sharp second. Over the aortic and pulmonary areas the first sound was inaudible, the second being sharply accentuated, the accentuation being most marked in the aortic area. An exaggerated second means increased backward pressure on the heart, and in the case of the aortic valve, it is generally the prelude to aortic incompetence and regurgitation. When the aorta has been affected, either by acute inflammation, as in fevers, or by chronic degeneration, it loses a certain amount of elasticity, and becomes permanently dilated under the force of the heart's beats. When this has taken place the rebound of the column of blood after the systole is more sudden, and produces the accentuation of the second sound in the aortic area, such as was present in this case. The defect was compensated by hypertrophy.

The rheumatic symptoms gradually subsided under *Bryonia* and Colchicum, and, finally, Pulsatilla 3, which last did more for him than any other remedy. It removed, after the other medicines had failed, swelling, pain, and numbness of the hands across the meta-

carpal joints, worse in the morning on rising, leaving him practically well. The only symptoms he had during the course of the treatment referable to the heart were temporary giddiness and buzzing in the ears. In this case I did not think it necessary to alarm the patient by explaining to him the condition of his heart, as I believed it would last him as long as the rest of his body.

I will now give the particulars of a case which first came under my care as one of "indigestion."

Case VIII.—Mr. J. W., a tradesman, who had done work about my house, such as gas-fitting and the like, consulted me occasionally for an "indigestion" he was troubled with from time to time. The first time was in February, 1888, he being then 38 years old. The symptoms of his indigestion were weight at the epigastrium after food, tenderness to pressure, and drowsiness after meals. These symptoms were quickly removed by *Bryonia*. He also suffered frequently from headache, tightness at the chest, pain between the shoulders, and at times a cough. His pulse was somewhat frequent, but there was nothing sufficiently remarkable about it to make me suspect anything wrong with his heart.

On April 13, 1889, I was summoned to see him in the greatest urgency. After a good deal of worry he had been suddenly seized with violent palpitation and faintness, and when I saw him he was in a death-like faint, pallid, with purple lips, and icy cold; in fact, he was in a very grave condition of cardiac syncope; the pulse was weak and slow. On examining his chest, I found the heart enlarged and a mitral systolic bruit present. I put on his tongue a dose of *Ignatia* 1m (Boericke & Tafel) and repeated it frequently, and he soon revived sufficiently to enable me to take him home in a cab (for he was at his place of business at the time of the seizure). On examining him more at leisure, I found the systolic bruit (which was soft) was audible over the apex and also over the left auricle. The condition was one of mitral incompetence with hypertrophy.

I now learned that for some time past he had noticed a shortness of breath on going up stairs, and three months before he had turned faint suddenly and been compelled to sit down. I continued the *Ignatia*, and I may say that ever since it has been a very good friend to my patient. He never goes anywhere without

a bottle of pilules of the medicine in the same strength, and whenever he has any sensation of weakness about the heart, whether induced by worry or by over-exertion, a few doses soon put him right. He has never had a fully developed attack again.

He is fair, and of a very sensitive temperament, and easily affected by worry, but active and muscularly strong. To return now to my journal:

April 14th.—Had a slight attack in the evening after talking. Dreamed much in the night; short breath on going up stairs; head feels rather light; feet rather colder. Continue *Ignatia*.

April 16th.—Headache in occiput; fluttering sensation in left chest; faint trembling after walking; a little fever; much flatus downwards; thirst; lips dry. *Arsenicum* 1m every two hours. *Ignatia* if required.

April 17th.—Went for a walk yesterday, but could not go far. Dreamed much all night—muddled dreams. Tongue white; still thirsty. Bowels rather confined. Occipital headache on waking. Tremor at heart. Repeat.

I need not follow out the case from day to day. There was another slight attack on the 20th, but by the end of the month the patient was able to return to his work. He had occasionally drawing or digging pain in his left side and at times a sharp pain, and headache remained troublesome. At one time he described it as a "floating weight" at the vertex. This was relieved by *Act. rac.* 1. On May 8th he complained of feeling a weight at epigastrium after food; sinking sensation comes after dinner and constipation. He received *Sulph.* 30, one pilule three times a day. After this he was practically well, *Sulphur* and *Ignatia* being the chief remedies he required.

Early in the following year he had influenza very badly, with pneumonia and pleurisy of the left side. The heart was not directly involved. The bruit was heard, though faintly. Sulphur was his chief remedy on this occasion. At present he is in very good health. If he over-exerts himself, especially when at work on great heights, as the roofs of London houses, he is reminded that he has a heart. I examined his chest quite recently, and found this condition:

Apex beat not felt. Area of cardiac dulness extends $2\frac{1}{2}$ inches to left of sternal edge. In pulmonary and aortic areas the first sound is soft; at the mitral area no bruit is heard, but the first

sound is impure. This shows that the mitral valve has been restored to competence, though not to its normal state. The sharp, clear sound of the closing of healthy valves is wanting.

This patient has never had rheumatic fever or any illness to which the state of his heart could be traced. He has always been temperate. Eleven years ago he was very nearly killed by a brick falling on his head from a building in course of erection; but this is the only illness of consequence that he remembers. I append his sphygmograph taken while sitting, March 21, 1893.

FIG. 4.

These few cases, chosen out of a large number, will, I think, suffice to prove to the Congress that valvular disease of the heart is often curable under Homœopathic treatment; and when the valves are beyond repair and the balance of the organ lost, much may still be done by strict Homœopathy to give power to the heart and restore its equilibrium.

The sphygmograms were taken with Dr. Dudgeon's pocket sphygmograph.

MOIST HEAT AS A THERAPEUTIC AGENT.

By W. A. Edmonds, M.D., St. Louis, Mo.

In the pathological and symptomatic make-up of sick humanity, fever and inflammation cut such an important figure as to be practically present everywhere in all the forms of disorder that afflict the race. These so uniformly go hand in hand that we rarely witness one without the other in any given case of disease. No well-marked case of established fever will long prevail without signs of a local inflammation. In exceptional cases, where the local inflammatory manifestation is very circumscribed and involves only a limited amount of anatomical structure, the febrile manifestation may be so slight as to form apparent exceptions to the rule, that fever and inflammation are practically constant in symptomatic and pathological association.

The celebrated French physician and scientist, Broussais, spent much time and literary effort to establish his theory that every case of fever is attended by its local phlegmasia. With equal propriety might he have spent time and effort to establish the proposition that every local phlegmasia has its associate febrile condition. Of the two conditions, interest is concentrated in the phlogistic or inflammatory state, both in a pathological and therapeutic point of view. In a pneumonia we have an eye to the lung involvement as a mode of relief for the pulmonary fever; in rheumatism, to get rid of the fever by a relief to the articular surfaces; and so on in gastritis, enteritis, cerebritis, carditis, cystitis, etc.

Practically, the successful management of inflammation constitutes the *summum bonum* of professional effort.

From the times of Hippocrates and Galen down to the early years of the present century, the best lights in the profession taxed ingenuity and thought to arrive at a correct theory as to the nature and cause of inflammation, partly as matter of scientific interest and practically to institute correct modes of treatment. These various

theories, with the names of the authors annexed, have been stated, re-stated, discussed, and re-discussed so often and so amply that a rehash here would seem tedious and unnecessary. The leading ones have been the vitalists, humoralists, super-excitationalists, mechanical and chemical. We think it safe to affirm that in every well-marked inflammation there are qualities and conditions involving the main element in each of these theories. It is a wise provision of nature, in the direction of human experience and activity, that as we grow gracefully old we become more simple, modest, and less pretentious; so that, as a profession and as individuals, we have come to esteem and define inflammation as an association of appearances known as *heat*, *pain*, *swelling*, *tenderness*, and *redness*. Of course, this association of conditions becomes in the future of matters fruitful in such superadded conditions as suppuration, ulceration, gangrene, atrophy, hypertrophy, and the various dyscrasias.

Having disposed of the various theories above so summarily as of little value scientifically or practically, we are in some sort estopped from much privilege or latitude in this line ourselves. But we think it entirely safe to affirm, as a conclusion drawn from observation and experience, that every case of inflammation consists essentially and primarily in a *capillary blood stasis* of the part. Physiologists teach us that that innumerable mesh-work known as the capillaries stands as the half-way place between the veins and arteries. Whether the motion in these little radicals is a *vis a tergo* from the heart, or by capillary attraction, or by a sort of secessive vermicular contraction, is still matter *sub judice*. We know, however, that upon the successful transition of the blood through these little tubules depends the suitable performance of that covert, mysterious performance known as assimilation and disassimilation—the repair after waste and wear and the removal of physiological *débris*. Now, any hurt or adverse agency, whether traumatic or toxic, which interferes with the capillary motion is at once announced by inflammatory manifestations—heat, pain, tenderness, swelling, and redness.

I believe the theory or idea has been generally conceded that the excess of blood in a part under inflammation depends upon an *invitation* of the circulation to take direction to the particular locality of the part under affliction. I confess I have never been able to see either fact or sense in such explanation. Of course, there is an

excess of blood in the part. How does it occur? I should say it depends upon a failure of the capillaries to send it along. They have received a hurt, either traumatic or toxic, and fail of this part of their function. At first it may be slight; stasis adds to the obstruction; until, after a short while, obstruction and capillary failure become so complete as to arrest all motion, to be followed by extravasation, death of tissue, suppuration, ulceration, gangrene.

Common-sense would seem to say or indicate that whatever helps the disabled capillaries in an effort to send the blood along must be palliative, curative, helpful. Leeches, blisters, cupping, blood-letting have heretofore been supposed to be the means to this desirable end.

As the result of observation and experience, I have pleasure in stating that *moist heat* has a range of power and opportunity for such a purpose unequalled by any therapeutic agent in the whole resource of the curative art, whether we consider it in reference to power of action or wide range of applicability. It is an easy matter for the busy, enthusiastic practitioner to get himself under the banners of a *fad* or a *hobby*—things which I formerly held in much odium and dislike. Lately I have fallen into much favor with such modes of thought and action. A good hobby or a good fad, if pushed with reasonable discretion, will certainly enable us to get all the good out of either fad or hobby that may inhere in the premises. Any excess or mistake may be safely left to the corrective help of experience and conservative observation. In a presentation of the claims of moist heat as a therapeutic agent I can hardly expect to present anything specially new. I simply desire, in a systematic way to gather together the various details and modes of its uses and activities. I opine some of my auditors will feel surprise at the conclusion of my contention, at the great range of activity of this simple, everyday agent. Precisely how it quickens capillary action and sends the blood along the normal modes and channels, I do not pretend to explain. That it brings relief in curable cases and palliation in others not curable, is beyond contention or controversy.

In the management of nervous disorders, insomnia, rheumatism and cutaneous affections, the vapor bath is of the very first importance. Submerging the entire body in hot water is in the same line and of very great value. In the early part of the present century an ignorant, illiterate New Yorker well nigh revolutionized the then

prevalent modes of treating disease by the introduction of what soon came to be known as the "Thompsonian Practice," Thompson being the author of the plan. He came upon the stage of professional action at a time when poor sick humanity was in agony and despair from the heroical uses of the lancet, the scarificator, the blister, plaster, salivation, purging and vomiting. Taking advantage of the odium attaching to these modes, Thompson and his coadjutors had for a time a wonderful run of success. His treatment consisted almost exclusively in the use of the vapor bath coupled with the abundant ingestion of hot *plizans;* so that the patient had moist heat *galore* internally and externally. He made abundant cures, but the system gradually fell into disuse from certain crudities and excesses attending its administration.

The great success of the celebrated hot springs in various parts of the world, of which "Hot Springs" Arkansas is a reliable example, is simply attributable to free bathing in hot water and the free drinking of the same on an empty stomach. Precisely the same results might be attained in the private family home if method and persistency could be accomplished in the use of the hot water internally and externally, with exemption from worry and business cares. The "Turkish Bath," now so popular as a luxury as well as in the cure of disease, has its chief resource in the moisture and heat, together with certain manipulations incident to the administration.

The hot "sitz-bath," so useful in various pelvic disorders, has a marked influence upon the condition of the patient generally, while acting well upon parts locally. Much the same may be said of a hot "foot bath." I doubt if the same amount of hot water could be applied to the same amount of external bodily space elsewhere with the same good result. In violent acute brain disorders a protracted hot head *douche* will sometimes act like magic. In the thirst, nausea and vomiting attending many cases of strong fever, nothing so quickly allays the symptoms as constant sips of hot water repeated for ten or fifteen minutes. Hot irrigations of the intestines, with hot abdominal fomentations, bring great relief in acute dysentery. In cerebral and cerebro-spinal meningitis hot-water bags to the head and spine will be found far better practice than the habit of freezing the patient to death with ice-packs and ice-bags. Chronic dyspeptics who suffer from eructations, furred tongue, bad breath, bad taste in the mouth, constipation of the bowels, scanty urine, may be greatly

benefited by drinking a large goblet or two of hot water on an empty stomach at early rising and at bedtime. The water may be acidulated with fresh lemon juice. In very obstinate cases of this kind much may be gained by systematic hot fomentations over the epigastrium for two hours at, say, from 7 to 9 P.M., the applications being renewed every twenty minutes. A good hearty sip of hot water should be taken with each renewal of the compress. This plan of hot-water drinking on an empty stomach with the evening fomentations should be continued every evening from two to four weeks, according to the needs and obstinacy of the case. I remember very distinctly getting this plan and idea some thirty years or more ago from a book on *Water Cure*, by an English author, Dr. Gully, who enjoyed much celebrity and practice at the time. It is very remarkable how much hot water may be taken on an empty stomach, with little or no inconvenience to the individual.

In cool or cold weather it pours away through the kidneys and bladder; in hot weather it finds additional outlet through the skin in the form of perspiration, bringing a peculiar sense of cleanness and bodily renovation, with improved secretions and excretions everywhere. I have come to attach importance to the lemon acid addition to the water, as rendering the water more palatable, and, besides, exerting a good influence on the stomach and other organs which it may reach. I usually prescribe the juice from half a fresh lemon to a pint of water. Should so much juice put the "teeth on edge," the quantity must be reduced or taken less frequently.

The whole range of poultices and poulticing, whether in domestic or professional practice, would seem to depend for efficacy upon the heat and moisture contained. Every old mother or nurse knows full well that the poultice ceases to do good when it gets cold. In mastitis, peritonitis, pneumonitis, pleuritis, and the whole family of furuncles, the good to be derived from the time-honored "mush poultice" is attributable to the heat and moisture in the application. A flannel out of hot water might do just as well, except that it loses its heat and moisture too soon, necessitating the trouble of too frequent reapplication. I remember very distinctly a case of infantile pneumonia which I had visited and prescribed for daily for a period of ten days or more without success. When I came to make my morning call I was agreeably surprised to find the child bright and almost well, from being quite ill at my last visit. The mother told

me in a sort of beg-pardon, apologetic manner, that she had applied a poultice to the patient's chest the night before. By the way, the best material of all others, for a poultice, is *flax-seed meal.* It retains heat and moisture well, and has oil enough to prevent adhesion to the skin surface.

We come now to speak of a most valuable use of moist heat in the management of the various uterine disorders. The use of this agent in the domain of gynæcology does not seem to have received any special, systematic attention until within the last ten or fifteen years. Now, it is the fad of the hour, and, like many other good things in the hands of indiscreet zealots, has received some misuse in the house of its friends. Many a poor woman is to-day being soused, drenched and irrigated, beyond all reason and propriety, at the hands of those without wisdom or discretion. The abuse to which a misdirected zeal has brought it, is only an argument or fact that there is much in it for good as well as misuse. To-day, if I should be offered the alternative to give up every other known form of local application, or accept hot water, as my only resource in such cases, I should unhesitatingly adopt the hot-water treatment as against everything else in the local line. Not that I underrate other agencies and modes, but this much by way of indicating the importance I attach to the agent I am now commending. I have now arrived at the point in my daily professional experience where I may say that I begin the treatment of every case of sexual disorder in the female with hot water irrigations. These are prescribed for morning and evening observance, from one-half gallon to one gallon being used at each application, from a fountain syringe. In very obstinate cases I add the use of the hot sitz-bath for ten minutes every twenty-four hours. If there be constipation of the bowels the colon should be filled with hot water, once in the twenty-four hours, to be retained as long as possible, jointly for help to both constipation as well as the uterine disorder. The colon full of hot water for the time acts much as a poultice might in behalf of the sick uterus and its appendages. In the adoption of this mode I do not stop at nice distinctions as to whether the case be one of cervicitis, endometritis, perimetritis, ovaritis, uterine displacement, or sub-involution. In most cases of long standing, several, or all of these conditions, exist. Each and all are benefited by the treatment. Usually this mode of treatment embraces and exhausts its opportunities in

from two to four weeks. Protraction beyond this probable limit will not only be useless but may prove a source of defeat or even drawback. Any powerful agent in the treatment of disease has its limit as to usefulness, beyond which an adverse result may be expected. I beg you to indulge a slight digression while I say in most cases I conjoin the glycerole cotton tampon with the hot water, and with great seeming advantage. Indeed, I sometimes find myself almost at the conclusion that these two agencies are well nigh equal to the relief of any and every form of sexual disorder peculiar to the female. In this sweeping declaration, of course I provide exception for the demands of surgery in case of lacerations, abnormal growths and malignant troubles.

As a hæmostatic, hot water has come to be a valuable resource in violent hæmorrhages, especially when from one of the bodily cavities, as the stomach, the bladder, the uterus, or the intestines. In such cases it should be used just as hot as will not endanger tissue integrity, and in bold, large quantities, thrown in forcefully with a syringe in a continuous stream, until some effect shall seem to have been reached. It is noteworthy that in cases where the hot water may seem a failure, the other extreme of cold water will almost surely succeed. The alternation of hot and cold water in bad uterine hæmorrhages is sometimes of the very first moment.

As a disinfectant and general renovator about the sick room, it would be hard to overestimate the value of steam and hot water. They have absolutely all the elements of success—cheapness, efficiency, promptness, harmlessness. We are decidedly of the opinion that entirely too much attention has been given to loudly vaunted proprietary compounds, as disinfectants, to the neglect of the two valuable agents we commend. We believe all parties are now quite agreed that no germ, real or supposed, and no toxic effluvium emanating from the sick body, can maintain identity and integrity under the action of water at 212° or steam at a higher degree. All toxic or germ activity is not only killed, but killed, neutralized, and washed away. There is no way so effective for renovating a sick chamber and all its belongings or contents as by the free use of steam and boiling water. An advantage under the steam and water *regime* is, that tapestries, clothing, etc., are not the worse, but rather the better, generally for future use if desired.

THE STUDY OF HOMŒOPATHY AS A DISTINCT AND COMMANDING DEPARTMENT OF MEDICINE.

By John C. Morgan, M.D., Philadelphia, Penna.

My friend, Professor Helmuth, presents to this Congress a plea, just and able, of course, as well as eloquent, in behalf of surgery as an indispensable force in the Homœopathic school. The title of my paper, however, whilst in no way impugning his position, assumes the converse view, as equally just and even more essential.

The special field of Homœopathy, viz., *Chronic Diseases*, owing to insufficient obedience to the tenets of the Founder, having been largely relegated to surgery, we are being hurried along to practical oneness with *the palliative school;* and our testimony to *curative* medicine grows, I fear, more and more feeble.

"Distinct and commanding!" Less than this, I cannot for one moment admit, as the true status of our God-given system; and must demand for it, and for its study, universal recognition as such.

The Civil War played an important part in American medicine; firstly, by abstracting from ordinary practice and teaching the bulk of the surgical talent of the country; secondly, by the intensification of surgical enthusiasm and skill, in connection with a large military experience; and thirdly, by the initiation of a characteristic surgical epoch, with imperious fashions and some fads of its own, on the return of peace. (This epoch, further stimulated by the Franco-Prussian war, now involves the whole civilized world.)

The effect of all this upon Homœopathy has been almost revolutionary. Our surgeons, in the army and navy, were numerous, despite hostile regulations. These, upon returning to civil life, observed with indignation the decadence of anatomy and surgery, and of the scientific branches in our colleges, and bent their energies to their rehabilitation. Disruption of the faculties, reorganization and reform were the immediate and general results; and from that time

our school has herein maintained, at the very least, a parity with the senior branch of the profession, this, also, having passed through a similar travail.

This happy conclusion, so creditable on our part, and so important, has not, however, proved an *unmixed* good to us. Nay, so far has the pendulum swung in the new direction that those of us who helped to set it in motion, with unaffected loyalty to Homœopathy and to its founder, may fairly take counsel with conscience, and ask ourselves if this revolution be not tinctured with elements of *retribution.* Of old, surgery did obeisance to the genius of Homœopathy, in our colleges and societies; now, it would almost seem, it is largely busy in trying to snuff her out!

The loyalty of her true adherents of the American Institute is assertive, but to many this whole subject is but matter for the merest toleration, as one tolerates a demented patriarch, who must soon pass away and cease from troubling the now active generation.

The loyal spirit has, I believe, succeeded in putting the profession on record as demanding that the "Institutes of Homœopathy," including the *Organon* of Hahnemann, shall be taught in all our colleges. Yet how is this demand complied with? How? By thorough drill, beginning with the Freshman year, maintained in the Junior, and enforced and perfected in all the practical departments throughout the senior year, and in the post-graduate curriculum, to which all Allopathic converts must needs look? Nay—not a bit of it! Homœopathic Institutes, being confused with the methods of the Old School—as if these were equally important (sometimes, indeed, and therefore called "Methodology"); these sacred truths of which we are the stewards, are cast, as an inert fragment of obsolete history, into the arena of the students' novitiate, alone; and the post-graduate, as well as the senior, is, above all, not permitted to waste his precious time with them, or their teachers, at all, or to abate his attendance upon surgical and special sub-clinics, a single hour, for their sake.

The common complaint of both, in the East and in the West, is, that on leaving the Homœopathic college, they feel themselves "utterly incapable of the systematic and thorough study of a Homœopathic remedy." This, I personally know.

A faithful teacher of Homœopathic Institutes may have succeeded in germinating the genuine seed in the minds of the fresh-

men, all unprepared and unfit as he has found them (since the highest type of medical intellect is needed for its just appreciation and culture). But in the succeeding years this seed is too often found to have been sown by the wayside, where the fowls of the air find and devour it, in its germinal immaturity; or, among the thorns of the semi-allopathy which spring up and choke it, as if through deliberate purpose. Indeed, if the second and third and post-graduate years had been planned for this obliteration of Hahnemannism, the result could scarcely be more complete. Our grand old man, Dr. C. Hering, if yet alive, would not hesitate, methinks, to apply the moral of the parable, and say, "This is the work of the devil!"

Indictment of the present, however just, can, however, do no good, unless the way out of its errors can be shown. A long intimacy with Hering and others of our "old guard," seems to emphasize my duty here. Permit me, therefore, to attempt this task. My first remedy has already been hinted at, viz., the study of *Homœopathic* Institutes *continuously*, throughout the three or four undergraduate, and also the post-graduate years! *All the chairs* in our colleges should be committed to faithful support of this programme, whilst neglecting nothing belonging specifically to themselves. With the adoption of the four years' curriculum, no plea of "lack of time" can be admitted, in the future, at least. Unfaithfulness to Homœopathy alone can account for its neglect hereafter.

Secondly, the science and art of Homœopathy must receive a logical classification in order for purposes of *parallel* and *progressive* study and teaching, in regular form. The intrinsic difficulties of this work heretofore have, indeed, been the sufficient excuse for much of the neglect here indicated, the reasons for which are evident, and need no discussion here. I offer the following suggestions in the hope of giving help, such as the hard experience and study of the past thirty-eight years, my Homœopathic period, based upon an original Allopathic education and practice of some years, have brought to myself.

Such a "classification in order" may be thus stated:

PART I.—*Hahnemann's Organon*, divided into chapters, according to *general subjects*. This reduces the mass of profound discussion to a simple and orderly arrangement, easy to study, and agreeable to read; Wesselhoeft's edition, modified, being the preferred

text. This should be studied in every year, in a continuity of evolution, by the parallel use of the following parts; that is, the several parts should be so taught, as to enforce, from their several standpoints, the principles laid down in the *Organon* itself; and in like manner, the other branches of medicine should be taught in the same spirit, and with the same tenacious purpose, from year to year.

PART II.—*Ætiology*.

PART III.—*Symptomatology;* Physiological; Pathological; Diagnostic; Pathognomonic; Pharmacodynamic; Prognostic; Therapentic. Also, Dietetic; Curative; Toxical; Pathogenetic; Surgical.

PART IV.—*General Pharmacodynamics; i.e.*, the philosophy of drug-action, with reference to primary, secondary, and the more remote evolution of drug-effects; and in assimilation with the known development of "natural diseases," in the *order* of *febrile action*, and typified in every paroxysm of an intermittent fever. Provings, rearranged thus, become a "speaking picture!"

PART V.—*Special Pharmacodynamics;* the study of the individual provings, that is, of the Materia Medica proper, in accordance with Part IV. and with the aid of such *classifications* and generalizations as have proved helpful in the work of selection and individualization.

PART VI.—*Clinical Therapeutics;* the verification of provings at the bedside; thus, the discovery of "characteristics" of the drugs, aided by the observation of repeated cures of symptoms not yet recorded in any proving. Besides, the illumination of pathology itself, and of its relation to various drugs, and hence the *interpretation* of symptoms—both of natural and of drug diseases. This part, in other words, has to do with *the Homœopathy of experience.*

Let these six parts be now successively presented in detail.

The Organon.

PART I.—*Chapter I.*—The "Introduction." Pages 17 to 46, called by Hahnemann, "A Review of Physic," with old-time historical intimations of Homœopathy, Criticisms, with Notes. Pages 47 to 63.

Chapter II.—The Functions of the Physician. Pages 65 and 66, § 1 to 6.

Chapter III.—The Autocratic Vital Force, the real seat of life and of disease, and the *only* proper Object of Treatment; its Sufferings, *i.e.*, so-called "Symptoms," Cure. Pages 67 to 70, § 7 to 18.

Chapter IV.—How Drugs Cure. Pages 70 to 76, § 19 to 34.

Chapter V.—Disease versus Disease; Unlikes and Likes. Pages 77 to 91, § 35 to 52.

Chapter VI.—The Methods of Medication, viz.: Allopathic, Antipathic or Enantiopathic, Homœopathic. (Etymology.) Exposition. Pages 91 to 104, § 53 to 71.

Chapter VII.—The Study of Diseases, Acute and Chronic, and their Management. Pages 105 to 111, § 72 to 82.

Chapter VIII.—Examination of a Patient with Acute, Chronic, or Epidemic Disease. The "Genius Epidemicus." The "Genius Chronicus." Pages 111 to 119, § 83 to 104.

Chapter IX.—Agents of Cure; the Study of Drug-Effects; "Primary" and "Secondary" Effects; Provings and Cures; Idiosyncrasies; Individualization; Conduct of Provings; a True Materia Medica. Pages 119 to 135, § 105 to 145.

Chapter X.—Practical Directions and Suggestions; Selection of the Homœopathic Remedy; Similitude of Symptoms in "Totality;" in "Characteristics;" *Drug-Action during Treatment; Dosage; Drug-Aggravation; Question of External Treatment; Management of Drug-Remedies; "Local Diseases;" Antecedents;* The Three Miasms of True "Chronic Diseases;" Previous Allopathic Treatment; other circumstances. Pages 135 to 157, § 146 to 209.

Chapter XI.—Special Mental Symptoms; Insanity; Paroxysmal Diseases (Intermitting, Recurrent, Alternating); *Intermittent Fever*, etc., Cure. Pages 157 to 170, § 210 to 244.

Chapter XII.—Additional Practical Directions; Management of Cases and Remedies; Dosage; Repetition; "Favorite Remedies." Pages 170 to 177, § 245 to 263.

Chapter XIII.—Pharmacy; Selection and Preparation of Medicines. Pages 177 to 179, § 264 to 271.

Chapter XIV.—The Single Remedy; The Minimum Dose; Proportional Effect of Various Doses; Dynamic Nature of Drug-Effects; Forms of Administration; Susceptibility of Living and Diseased Parts to Drug-Action; Transmission of Effects, by Sympathy, to Other Parts; The Use of the Skin as a Channel of Medication, etc. Pages 179 to 186, § 272 to 292.

Chapter XV.—(Restored to place); Mesmerism or "Hypnotism," ("Suggestive Therapeutics"); *with Notes.* Pages 227 to 230.

Chapter XVI.—Notes upon the General Text. Pages 187 to 225.

Index. Pages 231 to 244.

Ætiology.

PART II.—After the special part just discussed the next is *Ætiology.* No one doubts the importance of this, and it might seem sufficient here to name it as essential in a complete course on *Clinical Medicine* in any college of any school.

In Homœopathy, however, it acquires extraordinary importance, inasmuch as a successful prescription so often pivots upon the clear perception of *causes*, often remote in time and recondite in nature. Ever alert, ever suspicious of this, we should be!

I recall a most important case of metrorrhagia. Large sums of money, spent in both medical and surgical endeavors, and years of time, had brought the patient to feel that the pursuit was well nigh in vain, when a Homœopathic physician in Heidelberg, Germany, inquiring into the antecedents of the attack *in the beginning*, elicited the fact that it began after bathing in icy cold water, six years before, on the coast of Maine. *Cure* was then promptly initiated by giving *Rhus tox.*, 1x, twice a day, on this exact indication.

Previous abuse of drugs is a common ætiology. Cathartics, mercurials, and quinine are every-day drugs, and the recognition of their part in complicating, and even in originating, disease symptoms, is our daily duty. Besides, the latent remains of the original maladies, *suppressed* by these drugs, are of immeasurable force and constantly require treatment. Dr. Raue insists upon an initial dose of Nux vomica, after prior Allopathic treatment, in every case.

A *strain* years ago, or a wound of nervous tissue, or an old bruise may, when recalled, be of prime significance, demanding a corresponding remedy, as *Rhus tox*, *Hypericum*, or *Arnica.*

Constitutional hindrances often require the interpolation of *Sulph.*, *Calc.*, etc.

To ignore *causes* is, in our school of practice, to tie our hands behind us and to insure many failures.

In this connection, "Baffling Causes" deserve special notice, for, by these our best work may be, and sometimes is, spoiled. Thus, bad nursing, disobedience to orders, and many things of detail may

ruin an otherwise good cure. As a glaring example, a young man, the subject of gonorrhœa and under Homœopathic treatment, but, preparing for a pharmacy examination, was required to taste some thirty different drugs within a few days; got worse, naturally, but did not think to mention it until many days afterwards. Many such cases occur.

Symptomatology.

PART III.—Physiological, pathological, diagnostic, pathognomonic, pharmacodynamic, prognostic, therapeutic. Also, dietetic, curative, toxical, pathogenetic, and surgical.

This is the most essential of all studies in the practice of medicine, and as above outlined, most comprehensive. It belongs exclusively to no one school, and deserves universal prominence in the college curricula and in medical writing. The writers recognize this, but no college does it even scant justice. In Homœopathy, above all, it is the *sine qua non*, and at least as much time should be given to it as is assigned, for instance, to the study of Obstetrics.

The above order is planned for a graded course. The *pathological*, the *pharmacodynamic*, and the *prognostic* divisions require subdivision, thus: The first two into "general" and "special;" the last, the prognostic, into prognosis: of natural diseases, of the action of remedies, and of the interaction of both.

Considering these divisions *seriatim*, we note:

1. *Physiological Symptomatology*—This is simply a narrative of *abundant life*, with its conditions, causes, susceptibilities, and powers. Its "totality" is the rule of comparison for all the rest, and should be ever before the mind of the thorough physician, as *mens sana in corpore sano*. Deviations from this standard are *Diseases*. A few lectures under this head, following the "schema" of Hahnemann, viz.: the anatomical and physiological order, would be fruitful of intelligent interest in the subsequent study of *abnormal* symptomatology, whether natural or of drugs, artificially applied. It is in the physiological field that *symptom-interpretation* should begin, and it should thenceforth never be neglected.

2. *Pathological Symptomatology* is as yet taught only incidentally in the lectures on "Practice of Medicine," and in connection with the special diseases discussed. Even if there be a separate chair of pathology this is now held to mean tissue-change, plus bacteriology, almost solely; hence, symptomatology comes to be regarded by the

student as inferior, and later on he will be heard denouncing the fine art of "symptom-hunting"—for "fine art" it is.

One pathological specialty is characteristic of Homœopathy, viz., "chronic miasms," according to Hahnemann. Chronic diseases, when transmitted to offspring undergo "potentization" in successive generations; resulting in latent, but all-powerful poisoning; whereby family life is more and more vitiated. Family similarity is often available in choosing remedies for one after another of its members. For the symptoms, see Hahnemann's *Chronic Diseases*, vol. i., also the *Organon*.

As the medical mind is now constituted, even among the Hahnemannians, there are many important symptoms in any "totality" which are overlooked in the selection of the remedy, or at least belittled, until their significance is demonstrated by physical exploration. Thus, a physician prescribing for a neuralgic rheumatism of the left thigh found no suggestion in a co-existing trivial complication, viz., a semi-occasional slight hack or cough, until, being requested to "sound the lungs," he discovered (only) a blowing sound in the mitral region of the heart, due to an unsuspected and incipient endocarditis. Thereupon the whole malady acquired a new character and the curative remedy was speedily found by the *totality* of symptoms, *before unseen*, viz., *Aconite*.

In a similar but older case the cough remained uncured and very troublesome until the totality was added to by a cholera morbus, requiring *Arsenicum*. After this drug the cough also got well, but the pathological suggestion, when offered, was resented, as tending to "wreck true Homœopathy." Yet this is truly symptom-hunting of the best type.

In pathological symptomatology, also, the Hahnemannian schema is our best guide, and a good repertory is the ever-ready handbook for its orderly and interpretative study. The best for this purpose is that found in Jahr and Possart's *Manual*, and which should be separately bound. Its introductory comparisons of drugs, antidotes, etc., come into play at a later stage of the same studies.

The *detail* of symptoms as here given is both comprehensive and suggestive, and may be *extended* at will. Both "general" and "special" pathology are here represented. However, this book needs to be supplemented by the works of Tanner, Findlayson, etc., on "Clinical Medicine;" for this is what it is, and this

phrase will be a proper title of the full professorship of this whole subject. As *all* professors should *hold clinics*, the title must no longer imply a *faculty scapegoat.*

The *interpretation of symptoms* here finds a special function, of course; but a *warning* is required—not to spin cobweb *theories* therefrom unto vague pathological prescribing.

Interpretation of symptoms relates to the following subjects, viz.:

1. The nature of the *morbid process;* as, hyperæmia, active or passive; cardiac tone, or atony; connective-tissue growth; parenchymatous inflammation; suppuration; reflex nervous states, etc.
2. Lesions of function.
3. Tissue-lesions, *e.g.*, of epithelium; of nerve substance, etc.
4. Gross lesions of organs, *e.g.*, heart, kidney, etc.

Each of these classes is, to the experienced therapeutist, at once suggestive of a group of remedies bearing pathogenetic and therapeutic relations thereto, as judged by provings and by clinical observations. Yet the physician must never be *dominated* by past experience, but ever push forward in fresh research.

Hahnemann's Chronic Miasms and Modern Pathology.—A pertinent question here is, how does Hahnemann's doctrine of Chronic Diseases appear in the light of modern pathology? Are his "three chronic miasms" thereby consigned to oblivion as the "disorderly fancies of the master's senility?" Or do they appear therein, in a new dress, irradiating the field of current literature, and giving inspiration to current practice? First, is "repelled psora" a whim, or a grave pathological fact? Second, is constitutional syphilis a mere illusion, or a terrible reality? Third, is "sycosis," or systemic gonorrhœa, the conceit of a narrow doctrinaire, or is it a sad fact in the history and in the pathology of modern diseases?

One modern word will embrace the whole of these, namely, "septicæmia"; duration, or chronicity, is, then, the only thing left to question. Its *prevention* demands one prime condition, whatever its form, viz., *drainage.* Its production has also one prime cause, viz., *absorption;* and, again, this is the sure consequence of *non-drainage.* Add to this the local use of absorbent lotions, ointments, with frictions, plasters and all the invasive measures of "local therapeutics," and without doubt all conditions of systemic poisoning are met. "Repelled eczema" (the "itch," or "psora" of Hahnemann's day) has, in my own experience, been immediately followed by

hydrocephalus; everybody knows the syphilitic taint; and Ashhurst's *Surgery* is good authority for the reality of gonorrhœal septicæmia, or pyæmia. All authors of our day confirm the Hahnemannian doctrine of repelled or absorbed organic poison. Advanced anatomy elucidates it. The "superficial cutaneous lymphatics" lie just beneath the epidermic cells, open between them, and communicate by perforating the cutis with the deep lymphatics, thus furnishing a direct route to the circulating blood, and to every living cell in the body.

Microbes are the elements of mischief according to modern views; but the facts, as clinically seen by Hahnemann, were just as real as now, and were the sound basis of his theory, and the perfect justification of his practice and of his advice. Even his nomenclature, antique though it may be, when technically understood, is no worse than the modern; *e.g.*, "amyloid," etc.

The chronicity of psora, or septicæmia, using the modern phrase, and its protean expressions, to many unfortunate surgeons in our day, who have been victims of "blood-poisoning," are indubitable facts. Certainly, such may well be Hahnemanians. General loss of vitality and susceptibility to morbid influences and processes, so graphically described by Hahnemann in volume one of the *Chronic Diseases*—these have since been their constant experience. See also a quotation from Reynolds by Prof. L. L. Danforth, TRANSACTIONS of the American Institute of Homœopathy, vol., 1892, page 267, in "Antisepsis in Obstetrics."

Some years since the writer contributed to the *Transactions* of our Pennsylvania State Society a paper, in which the unity of origin of all constitutional taints was considered at length from the standpoint of evolution.

Action and Reaction.—No range of *doses* monopolizes either the "primary" or the "secondary" effects of a drug; nor are the "double and opposite effects" ascribed to all drugs to be wholly found in the action of opposite grades of dosage, large and small. Nevertheless, it is true that large doses display the primary in a far greater measure than do the small, whilst in regard to the secondary effects the predominant display is just the reverse. Primary action is the attack of an enemy. Secondary action is the repulse of that enemy. In both are signs of battle—*i.e.*, *symptoms.*

The primary effect, in the language of Allopathy, is called "the

physiological action." This being transient, is regarded as of little or no specific individuality or significance for any given drug; yet in such quarters it is held to be the only possible medicinal action of any drug, to be maintained by ever-increasing doses, according to the surgical idea. From this point of view, the doses, as well as the specific individuality of Homœopathic remedies, are absurd beyond description.

In taking such a position, however, they themselves necessarily commit the glaring absurdity of ignoring that great law of physics, viz., "action and reaction are equal." Further, they ignore the *added vital* resistance against all things inimical; and still further, the fact that all drugs are, *per se*, thus inimical in their primary influence. The materialistic and the vitalistic philosophies alike, and throughout, support our view in this matter. The secondary is the *permanent and final*—the *curative* effect.

Natural law, however, as generally recognized, is rarely unconditional, and this "law of reaction" is conditioned by an important proviso, viz., that the preceding "action" be neither destructive nor disabling.

The Homœopathic law submits to this self-same proviso, and hence it *implies* "the minimum dose," with conservative repetition, according to the medical idea. So far as we know, it submits to but one other, viz., the *curability* of the given case. With these provisos, surely "likes *are* cured by likes."

3. *Diagnostic and pathognomonic* symptomatology are too well valued and understood to need more than mention here, but a thorough course of instruction must specifically include them; only, the physician should be able always to distinguish drug-symptoms from those proper to the "natural history" of the disease *per se*.

4. *Pharmacodynamic symptomatology* is the capital city to which, in Homœopathic practice, all roads lead; and the "totality" is the measure of the study. The physiological and pathological significances, previously studied, here find their higher illustration in the proving-records of the materia medica. Indeed, a prover is doubly equipped for his important work if he has had this previous study; but he must avoid the error of writing down his subjective pathological opinions in place of giving a faithful statement of the observed phenomena. Still, symptoms understood are symptoms

remembered, and both prover and student should understand all that is possible. Even single symptoms, understood, illuminate the totality, as above shown.

The diagnostic powers of the mind will here find a most difficult yet most remunerative employment.

Here, again, the *Repertory* of Jahr and Possart affords a practical analytic handbook. Each chapter, indeed, is full of points for *parallel* or for consecutive study of all the subdivisions of symptomatology.

The strictly Hahnemannian and the final use of a repertory is as an index to the materia medica, where, only, the salient symptoms are found in their fulness, and thence the totality; consulting the provings proper under some one, and then others, of the several remedies therein suggested—examining the various drugs, one after the other, in the order of their apparent similarity, until the *most* similar is found.

These provings are the *sanctum sanctorum* of symptomatology.

5. *Prognostic Symptomatology.*—"Dealing in futures" is a business phrase which applies well to the physician's work. It requires close study. In the evolution of disease *the outcome* is of absorbing interest, and this is judged by: 1. The natural tendency of the malady. 2. The intensity of the particular attack of the same. 3. The importance of the specially affected organs and the amount of their involvement. 4. The amount of physiological error. 5. Heredity, age, sex. 6. Vital force, and the means at hand of sustaining it, by food and other hygienic conditions. (And here, be it observed, that to the followers of Hahnemann, the *constitutional* status is ever *paramount*, and *its symptoms of the highest rank*). 7. The environment, as a whole, is to each patient an individual factor, intensely bearing upon prognosis. This, too, has its *symptoms*, mainly in the sphere of "conditions" of aggravation and amelioration, and nowhere is there a wider field for interpretative study. 8. Lastly, prognosis rests, in large measure, upon the character of the treatment, a fact to which our school is fully alive.

However, the mere outcome of the disease itself is not the whole of the subject. The *action of every prescription* is a proper subject of scrutiny and forethought. The *probabilities* of aggravation and amelioration; the *reasons* for the same; the periods of probable occurrence; the interpretation of *paroxysmal* and other changes;

the incidental drug-provings which may crop out, intended or not; their recognition, anticipation, and guidance, sometimes their open prediction—these are a part of our daily duty, and should be made the subject of definite study and teaching.

In all, the *symptoms* of the given case must play a great part and require close study. The chair of clinical medicine has this field for its own.

6. *Therapeutic Symptomatology.*—This is the climax of our work, and it includes all the rest. Whatever their help, however, *necessity binds us*, for the present and after all, to the mechanism of Hahnemann's method as laid down in the *Organon*. In pursuing it we may yet invoke the aid of Bœnninghausen, with his fourfold classification of symptoms—"location, sensation, condition, and association" (or concomitants); also of Hering, with his essay on Hahnemann's *Three Rules*. All of this relates closely with the *Selection of the Remedy*.

"Taking the case," by the rules of Hahnemann, is the first and most important step in therapeutic symptomatology; the use of the Repertory and of the Materia Medica duly follows. To be able to do these rapidly and successfully is a necessary attainment, and no Homœopathic physician is prepared for his work who has not become fairly expert therein; hence, no college has fulfilled its contract with its students which fails to thus qualify them by *special* and careful instruction.

In this connection I recall a remark of Dr. J. T. Temple, of St. Louis, thirty-five years ago, and which has proved invaluable to me, viz.: "I find my best selections of remedies are made under the rubric, "Generalities."

I agree largely with him, but would extend this term so as to include all that follows it in an arranged proving, viz., skin, sleep, fever, conditions; also, and above all, mental states, together with related *attitudes* and *actions*. All these, grouped under the one heading, express strikingly the whole constitutional status.

Minute Localizations.—Paradoxical as it may seem, we may sometimes, on the other hand, get our best indications in the *minutest localizations;* but that these readily harmonize with the other, is plain enough.

Dr. Jacob Jeanes, of Philadelphia, was an expert in this line of study, *e.g.*, in his discovery of the specific relation of *Stramonium* to the hip-joint, especially of the left side.

Dr. A. Fellger also contributed to it; as in his indications for *Aurum*, *Mercury*, and *Kali bichromicum* in syphilis, relating them, respectively, to the palate, the fauces, and the pharynx; and many others might be named. The best guide in this particular study is Allen's edition of *Bœnninghausen's Therapeutic Pocket-Book* or repertory, in which "locality" is pretty thoroughly wrought out, and the "sides" of the body, etc., presented under each heading. *Further minuteness*, however, can be secured by subsequent reference to the Materia Medica, and by clinical observation.

Again, Dr. Lippe recognized a point of the greatest practical significance in reference to *relief from medicinal palliatives* as well as from palliatives of other kinds; for instance, from coffee, from alcohol, from vinegar. Dr. Hering, in his *Materia Medica*, under many remedies, observes the same principle, in the rubric "Other Drugs," as to both amelioration and aggravation, etc., of these upon the proving-symptoms and the therapeutic effects. Hering and Lippe alike would regard such indications *merely* as additional reasons for the choice of or objection to the remedy under study, *i.e.*, when the patient is worse or better, as the case may be, from such palliatives or from such "other drugs" when taken surreptitiously by the patient or of his own self-treatment.

On the other hand, some of our school have taken an opposite view of this subject, especially if such palliatives form a part of the "folk-lore" of the common people. Dr. Hering himself venerated this sort of folk-lore. Hahnemann has rescued many a medical tradition as to the powers of drugs. Teste, in his *Materia Medica*, has scrupulously done the same, believing that there is more than palliation therein, even cure, provided potentization and individualization be invoked. Following this lead, Macfarlan, of Philadelphia, in view of the traditional and empirical use of common *tar* (*Pix liquida*) for the cure of skin diseases, potentized it for internal use; and now *Pix liquida* proves itself almost specific in eczema and alopœcia.

"Symptoms which are strange, characteristic, and peculiar"—paraphrased by Prof. C. G. Raue as "queer symptoms"—are of the highest *therapeutic* rank, both in natural diseases and in the Materia Medica according to Hahnemann, and require special study. They may be wholly irrelevant in pathology as now understood, being often merely *personal*, but they are in subtle relation with the constitutional substratum; thus essential.

If none of these indices ("*characteristics*," "*keynotes*," etc.) be conspicuous in a given case, the drudgery of studying the whole totality of symptoms in detail can yet lead to the true similimum. In the very early days, when our Materia Medica embraced but few drugs, and all the provings were short, it was no great task to study the whole, at any time, or even to keep it mostly in memory; but this can no longer be said.

The writer once sought a remedy for a case of intermittent fever; chill beginning on the right side. Taking Jahr's *Symptomen-Codex*, he examined the "Fever" rubric of every drug, and found under *Rhus tox.*, "the left side of the body felt hot, and the right side cold," etc. Examining for the other symptoms—pains, etc., this drug was found to have all of them; and *Rhus tox.* was then known to be the remedy.

In this work the ubiquitous four categories of Bœnninghausen constitute the classes into which the symptoms naturally fall. In "taking the case" it is desirable to express in writing, for *every marked feature* of the same, all, or rather the first three of these categories. This will greatly facilitate their use in the subsequent choice of the similar remedy.

These categories, familiarly called "Bœnninghausen's Four Points," cannot be too frequently stated. In taking the case and in selecting the remedy, they are a never-failing guarantee of exact thought and practice.

Category 1st.—Locality.
" 2d.—Sensation (kind of symptom).
" 3d.—Condition (of worse and better).
" 4th.—Concomitants (or associations).

Allen's *Bœnninghausen's Therapeutic Pocket-Book* is the handbook for the easy pursuit of this method. In every perfect study, however, the final step must be a consultation of the Materia Medica (or "provings") under each seemingly similar remedy, *comparing* each with the others through Hahnemann's schema, and thus determining the identity of *the most similar*, which is the object in view.

This method of comparison of similar drugs is the *clinical;* it is distinct from the non-clinical methods; and is illustrated in the process of selection of the similimum in any subtle, difficult case of chronic disease. (See Hahnemann's *Three Rules*, by C. Hering.)

This consists in taking two or more drugs, as found by means of the index or repertory to be closely related to the symptoms of the case (as well as to each other, of course), for trial. Opening the *Materia Medica* at each of these, read, rubric by rubric, noting the agreement of each with the case as previously written down.

Discarding the least similar, the chief simile is again compared with the others, and the best chosen.

The "numerical method" of finding the similimum is a variety of the foregoing. Its most salient expression is found in Dr. W. J. Guernsey's *Bœnninghausen.* In this the rubrics of the *Therapeutic Pocket-Book* are printed upon separate long slips of stiff paper, with the *rank* of each drug thereunder, 1, 2, 3, 4, in numerals. Selecting the slips containing the various symptoms, they are placed, side by side, upon a table; then each drug, beginning with those of highest rank, is counted by adding all its printed numerals together. The one having the highest number is held to be the similimum, irrespective of the claims of keynotes, etc.

Individualization in practice, so insisted upon by Hahnemann and his true disciples, can surely be realized through the convergence of all these studies, based upon a faithful preliminary college drill; and thus the future of Homœopathic therapy may prove an advance upon even the wonderful success of the pioneers!

The plan of Bœnninghausen separates the symptoms from each other, as actually observed, and the localities and kinds of symptoms, pains, etc., from their conditions of aggravation and amelioration, etc. Now at first sight this seems to abolish all prospect of just combination. In practice, however, the drug-genius is found to corroborate and fully justify his method by satisfying therapeutic effects.

Several specialties in symptomatology demand a further continuation of this discussion, all related to general clinical practice, and catalogued at the beginning of this second part.

The first, the Dietetic, is recognized in these days at its true value by many physicians; yet by too many, in no scientific spirit. The perusal of *Pavy on Food*, and similar works, will be the proper means of studying this branch of our present inquiry.

Every one should be prepared, on short notice, to furnish information to patients, which is often indispensable, and occasionally all-sufficient, to cure, from the dietetic standpoint.

Pathological symptomatology having furnished the facts and indications, of *diabetes*, for instance, it is more important and effective to regulate the diet, excluding starches and sugars, than it is to give medicine, however well chosen.

In diarrhœa, and the like, it is frequently essential to stop the use of all coarse-grained cereals, as granular oatmeal, all sorts of vegetables or fruits; or at least, to strain out of a desirable vegetable soup, all unreduced lumps, which are indigestible and aggravating.

On the contrary, in constipation, these substances are most salutary, and are to be prescribed. Also, the profuse use of water, especially at night and morning. *Bulky* meals, not too rich or heavy, and often late at night may be serviceable. Eating fruit at bedtime, and just before breakfast, with the assistance of water drinking, is aperient in effect.

Anti-fat diet, and building-up diet, etc., all are the outcome of discriminating study of this kind of symptomatology; and all should be carefully taught in the medical colleges, and at length. This is now much better done than of old; but there is room for improvement.

7. *Curative symptomatology* is that which expresses the amendment of function and of tissue-formation during the treatment of disease. Applying to drug-treatment the light afforded by the foregoing discussion, what signs have we, as Homœopaths, to guide our judgment of its good effects?

The first, of course, is diminished tissue and organ-lesion, as to extent and intensity. Secondly, improved psychical state. Thirdly, increased physical strength. Fourthly, correction of functional errors. These, we have, in common with all physicians. The opposites are, *a priori*, unfavorable.

Again, in paroxysmal diseases, as neuralgia, intermittent fever, etc., we have an improved state of secretions, shown by the tongue, the skin, the bowels, which is a *sine qua non*, in cure, here. Further, the amelioration of the attacks, the shortening of the same, the postponement of recurrences, the lengthening of the intermissions, the removal or improvement of complicating ailments, the improvement of the intermissions, as to special symptoms and general well-being.

On the other hand, aggravation of the paroxysm may indicate only the Homœopathic action of the drug, and require the entire

cessation of all medicine except a placebo and a watchful waiting for the ensuing vital reaction to cure.

In constitutional ailments, a gain in flesh, diminished complaints and other familiar signs are at hand to show curative conditions. Normal temperature may be added, in all sorts of cases.

These are, besides, in Homœopathic practice, certain subtle indications which experience has proved to be reliable. Thus, *susceptibility* to environment and to other circumstances, often annoying, disappears. Dr. Lippe used to say of the *Natrum carb.* patient, "He must carry an umbrella when the sun shines hot; you give him this medicine, and he no longer carries or needs his umbrella."

Again, in any disease, especially the acute, if the patient *falls asleep* soon after taking a dose of Homœopathic medicine, it is pretty good evidence of its curative fitness, and a promise of good to follow.

Once more: if, in all local symptoms, the person is no better, or even worse, yet in the general sphere feels "more like himself," or, as Dr. H. N. Guernsey phrased it, "not locally better, but 'all-over better;'" he *is* better, and patient waiting under a placebo, will later realize universal improvement. Even in diphtheria, with assurance of proper selection of remedy, and a single dose given, high, in consultation; finding, on a second visit, some hours later, that all was *in statu quo*, this great prescriber remarked: "The patient is certainly *no worse;* therefore, the bad tendencies are arrested, at least, and that means, he is better; continue the placebo;" and the third visit justified this decision.

The same authority told a scared doctor, who had, in a case of broncho-pneumonia in a child, repeated *Bryonia*, 200, until brain symptoms supervened, "Well, doctor, *you've nothing more to do;* give Sac. lac., and wait, and you'll cure the case; but *don't spoil it* by giving any more active medicine." A few hours demonstrated that he was right. It is easy to "spoil a case;" let us beware, therefore, of undue officiousness in critical cases.

Thus, pathogenetic symptoms, "read betwen the lines," may be most pleasing to the expert; always provided the drug be indeed the similimum.

Further: when the "inmost" of the person, the nobler organs, and the psychic nature, grow better, and when the symptoms of the malady seem to move from within outward, or from above

downward, the patient is better. And yet again, if the *latest* symptoms (especially in chronic diseases) *improve first*, followed by the others, in the inverse order of their appearance, a true and *permanent* cure has commenced, and must be let alone.

8. *Toxical symptomatology* is fairly well taught now in all medical colleges, and we need only to refer, besides, to the standard works on poisons, under this head.

9. *Pathogenetic Symptomatology* has already been hinted at, above. But it requires distinct elaboration. Diagnostic and prognostic, in part, it may be best studied, in these relations. In drug provings, and in therapeutic medication, it is likely to exercise the medical mind to its full capacity, But that capacity is too often but puerile, even full capacity is too often but puerile, even among well-educated physicians; and hence, the better the teaching and drill, in the college should be.

Lack of faith in drug power, especially in attenuated doses, emasculates the student's mind at this critical juncture—for such it is. Such a one should first clear his horizon of these skeptical vapors. The records of provings of insoluble substances, as *Silica*, *Lycopodium*, and many more, and of that familiar condiment of our tables, common salt, or *Natrum muriaticum*, and the Austrian re-proving of the latter, sweep away all of the reasonable doubts of candid Homœopaths; as witness Dr. Watzke, the superintendent of the last named. He says, "I am, alas! (I say, alas! for I would much rather have upheld the larger doses, which accord with current views)—I am compelled to declare myself for the higher dilutions. The physiological experiments made with *Natrum muriaticum*, as well as the great majority of the clinical results obtained therewith, speak decisively and distinctly for these preparations."*

Pathogenesis goes hand in hand with curative drug-action. Hahnemann's original reason for attenuation was the diminution of the former, and was impressed that this did not, by any means, abolish, but only refined it.

Yet, more; he claimed that no dose yet known is so small, that it is inferior in strength to the natural disease to be cured. Still further, he held that the cure depends upon that fact, and that it produces, always, a disease of like nature, and superior strength,

* See Hughes' *Pharmacodynamics*, 1876, page 562.

which supplants the original disease, and thereby, alone, can the Homœopathic cure, so far as we know, be effected. (*Organon*, § 24 to 34; 279 to 283). In § 29, he says, "an artificial morbid affection is *substituted*, as it were, for the weaker similar natural disease." He also indicates that a drug-disease, being brief and self-limited, provided the doses be not toxic, it is soon afterwards terminated by the vital force, and its own self-limitation.

One of our daily difficulties in Homœopathic practice is to reduce the morbific drug-action to comfortable limits. Any additional method of limiting and controlling this would be welcomed. One, that promises something, is to give the doses, so far as may be, immediately after meals; but this is limited in its applicability. Other timing of doses may help.

Now, in general, what signs can be considered as evidence of drug-pathogenesis, either in a proving, or during its therapeutic administration. Our standard of comparison has been already set up, viz; *Physiological symptomatology;* and to that we must refer. *Mens sana in corpore sano*—the consent of all healthy organs and functions—produces a *synæsthesia*—a *total sense of well-being;* and any deviation therefrom means: "I am sick;" and whenever a drug, or other morbid influence has preceded such deviation, it surely has *some part*, small or great, in its causation.

No one agent, however, can claim the *whole* of such causation. No physiological error would be possible, of course, without a personal, individual susceptibility, and this individual response. Again, no such effect was ever independent of the existing *environment.* In a drug-proving, then, "pure drug-symptoms" are an absolute impossibility; and *every* symptom is the outcome of the *three-fold* activity, viz; of the *individuality;* of the *environment;* and of the *drug* (which is but a special form of environment, after all, however). Now, the symptoms appearing at the apex of these three forces form the so-called drug-pathogenesis; and the three must always be reckoned with.

The first named is, of course, modified, in disease, by a previous—a fourth agency, viz: the originating cause thereof; but the individuality is there; and if the drug be a true simile, the two forces will neutralize each other, up to the point of the "just sufficient" dosage; and cure results. If either predominate, the "symptoms" declare it.

Now, how shall we distinguish symptoms which are present because of the interaction of the drug-force with the others, and are hence its fruits (with their aid).

Firstly. If the natural history of the individuality, in the state of health, cannot duplicate a symptom, with the same environment, the third factor, the drug-force, *must be* the efficient cause.

Secondly. If previous provings show that in other individuals, the same drug has displayed the same, or very similar symptoms, they are reasonably sure to be drug-symptoms, so-called.

Thirdly. During the treatment of disease, consider the natural history thereof; and if the new symptom or symptoms be alien to its natural history, the environment being the same, the remaining factor, the drug must be held responsible for them.

Fourthly. Changes of environment, however, will initiate a corresponding change of symptoms and "conditions" (or "modalities"); but withal, even these will be also stamped, *characteristically*, by the modifying force of the drug-factor.

Fifthly. New psychic and mental errors, pains, altered functions, obscure chills, spasms, fevers, etc. (in "Fever Order"), are the common forms of symptoms produced during treatment of disease in the line of drug-pathogenesis or so-called "Homœopathic drug-aggravation." The latter phrase, however, belongs more correctly to the increase of *pre-existing* disease-symptoms after the administration of the drug. This following "low potencies" the drug may be *pushed through* such an episode; the reaction following, with more or less effort of the emunctory or secreting organs, in the way of elimination of the drug-excess. But, in using "high potencies," experience shows that a placebo is the best answer to the same. (It may be here mentioned that a convulsion is the fair analogue of a chill, in practice.)

Supposed Sources of Fallacy in Provings.

The *domination* of subjective or of environment influences is not a sufficient ground for condemning a proving. The former simply announce the kind of individuality most susceptible to the other two factors when acting together; and the proper *grouping* of observed symptoms will depend upon making use of the subjective or personal symptoms *in conjunction with those alterations* which are excited by the other factors, viz., the drug plus the environment.

Again, the symptoms directly traceable to *environment* only, one may suppose, do not fall short of the scientific requirement, as experience shows, and, *a priori*, it must be, that a *compound susceptibility* exists; the other two factors, the individuality plus the drug, prepare the total physiology for certain responses to *each kind of possible environment.* (No proving is absolutely complete short of the test of all of these, as well as of all kinds of individuality.)

My own proving of *Gelsemium* in April, 1861, illustrates all this. Reading the telegrams from Charleston, S. C., concerning the battle at Fort Sumter, my system, in its original individuality, had been so modified by two weeks' use of the drug that "threatenings of diarrhœa" always followed, and I stopped the proving in the belief that the further record of such symptoms would be misleading and fallacious. But Dr. Hering knew better, and *he* announced that "*there* is the keynote of *Gelsemium!*" This was also the "latest symptom."

What shall we do with the many striking pathogenetic symptoms often arising after the taking of a drug by the sick? These have often proved *intensely characteristic* of the remedy; but their use is hazardous, and cannot be approved until further cautious experiment has eliminated all chances of error. In cases where several remedies have been taken this rule is urgent indeed.

Surgical symptomatology is now so well studied that it will here suffice, in the main, to refer to the current authorities. Several points, however, closely concerning the general practitioner must be here specified.

First. *Septic fever.* Some rise of temperature, after the shock of an injury or an operation, is only reparative and salutary; let us call it "primary fever." But if this do not fall in a day or so, or, having fallen, shall again rise, as shown by the thermometer, used at least twice daily, it is "secondary" or "septic fever," and the only thought then must be to open, irrigate, and disinfect the wound-territory thoroughly. The Homœopathic dilutions will perform their accustomed work all the same afterwards, especially the lower, but not exclusively.

Second. In peritonitis frequency of pulse is more significant than rise of temperature. Thus, the greatest of signs in universal surgical symptomatology are to be found in the temperature and the pulse.

Third, and lastly, in hæmorrhage, as in chills, the temperature is the test, *i.e.*, a fall to 97° F. or below.

General Pharmacodynamics.

PART IV.—Based upon the *Organon*, and rearrangement of provings *in accordance with the type of Intermittent Fever*, etc.

It has been said, by some (Dr. Dickson of London, and others), that "all disease is Intermittent Fever." Certainly, this dictum will but confirm the experience of many physicians practicing in malarial districts; for, every day, it seems to be restated by Nature. Even in non-malarial countries, so-called, close observation supplies a plenty of illustrations in the course of varied diseases.

Drug Diseases are no exception. Plainly, this must appear to every Hahnemannian; for, "every drug may cure Intermittent Fever" if duly individualized; the natural and the artificial disease alike presenting abundant variations—in *proportion* of stages, in *sequence* of the same, in *concomitants* of each, in conditions of aggravation and amelioration, etc. etc. *Generalities of all kinds* are easily assignable to "stages," and are extremely significant.

Comparing these in detail, stage by stage, we observe:

a. Certain *general* and local symptoms of every drug proving, regardless, *pro tem*, of the mere date or observed order of occurrence, assimilate with *acute physiological depression;* in other words, with the *cold stage* or "chill." Such symptoms, whatever their date, are *essentially* "primary," and represent truly the initial shock of the drug disease.

b. Another set of symptoms corresponds, accurately and thoroughly, with *acute physiological exaltation*, yet a minus of secretion, also irrespective of date; in other words, with the *hot stage*. This is still a "primary" form under Hahnemann's nomenclature, being simply a fuller development of the morbid impression and of the vital disturbance thereby; but incipient secondary vital reaction has now begun to *mingle* with the primary effect.

c. A third set of symptoms, usually following the hot stage, appears in intermittent fever with a plus of secretion, the *sweating stage* or *remission*. In *re*mittent fever it does *not* ripen into a full *inter*mission; in intermittent fever this does happen; but in both cases this stage is evidence of *acute physiological exhaustion;* the primary effect is not quite abolished, yet it is subsiding with *gradual*

approach of vital or curative "reaction," which is synonymous with "secondary effect." This is imperfect and uncertain in remission, however, which implies *important congestion* or other *lesion*, preventing complete intermission and having an evil prognosis. Nevertheless, we may say, in general, that in both the hot and the sweating stages vital reaction approaches nearer and nearer, nay, has already commenced. Corresponding symptoms of such a state in a drug proving are to be diagnosed and to be placed under this head.

d. A fourth state, with definite symptoms, is seen in a completed intermission—the "apyrexia." The same class of symptoms, general and local, are to be sought and noted in every proving, and these being ameliorative, compared with the first three, they may be regarded as mainly "secondary." They have, however, some residual organic lesions for their basis, and mean *incomplete* reaction only.

e. A fifth, more advanced state, is the stage of *Sequelæ*, that is, the organic and functional lesions remaining after the paroxysmal stages have passed, perhaps entirely ceased. In *heroic provings* this may also be distinguished and should be classified as a subdivision of the secondary reaction, still blended with relics of the "primary effect."

f. Recovery is, sixthly, *perfected* "secondary effect." Its symptoms are subtle often, but negative. Practically, *health* is reached.

g. A seventh stage of intermittent fever must sometimes be noted, viz., that of periodic *recurrence*. The symptoms of the original "primary effect" reappear and are to be classed as such, *not* as any part of the "reaction of the vital principle" or "secondary effect." Indeed, it is a clear testimony to organic sequelæ, apparent or occult.

h. In every proving a careful study of the symptoms will enable one to distinguish their relation to the several stages of intermittent fever, and the resulting groups may then be arranged in the foregoing succession—the true *perspective of the drug-disease picture*, which thereby becomes luminous, continuous, natural, regardless of varying temperaments of provers, varying dosage, and dates of symptoms, and of their written or printed sequences, resulting from such empirical reasons.

i. Instead of *copying* the symptoms in this "fever order," it may suffice to so *mark* them that they may be read at a glance in that order. *Pencils* of divers colors being provided, *blue* dots before

certain symptoms would place them under "chill stage;" *red*, under "hot stage;" *yellow*, "sweating stage;" *green*, for apyrexia; *black*, for sequelæ, etc.

j. *Natural diseases*, as well as drug-provings, develop in the *fever order*. Even chronic diseases show it; and no perfect *simile* between disease and drug can exist without regard being had to this same fever order and to the *febrile stages*, one or all (nature sometimes seems to skip one or more), which truly assimilate the symptom-groups of the case and its remedy. Hahnemann's remarks on intermittent fever (*Organon*, § 239, 235, 236, etc.) apply thoroughly to *all* forms of disease and to nearly all remedy-selection and administration.

k. One can now appreciate how insufficient is *mere date* as a criterion of "primary" and "secondary" symptoms. In fact, *absolute contrasts* of all sorts are abhorrent to nature; and as in the fevers, all seeming contradictions blend somewhere, even in date.

This old notion recently cropped out when a Homœopathic physician declared that "as the *primary* symptoms of drugs alone can guide to the similimum, the *secondary* (or late) symptoms have no right to any place in the materia medica."

The date of a symptom in a proving depends on *varying circumstances*, as temperament, dose, time of taking, repetition, and environment, and hence is fallacious as a test.

Furthermore, under this head, Dr. C. Hering, after long experience, decided that the very *latest* symptoms of any proving are probably the *most characteristic*.

To all this a *climax* is needed for each drug—a *keystone*, as it were—completing and perfecting the symptomatic arch and uniting the primary and secondary abutments with a single phrase for each, related but antagonistic, and expressing its *genius*. *Diagnosis* from the "totality of symptoms" is the means by which this end is reached. The search in itself is a fascinating and valuable exercise.

All symptoms, primary and secondary, naturally group themselves around these two in the completed picture, but in their proper "fever order."

Illustrations.—Thus, in *Aconite* we find in the "primary" range ANXIOUS RESTLESSNESS; in the "secondary" range, REPTILE-LIKE TORPOR.

In *Rhus tox*, primary, RHEUMATIC RESTLESSNESS; secondary, TYPHOID UNCONSCIOUSNESS.

In *Hyoscyamus*, TURBULENT RESTLESSNESS versus PROFOUND STUPOR for primary and secondary states, respectively.

In *Arsenicum*, PROSTRATED RESTLESSNESS versus DEATH-LIKE COLLAPSE.

In *Chamomilla*, WALKING ABOUT LIKE A CAGED ANIMAL versus DOGGED, QUIET INCIVILITY.

Ferrum, WALKING ABOUT TO RELIEVE SEVERE DULL PAIN versus ANÆMIC INERTIA.

Belladonna, HASTY ACTIVITY versus DREAMY STUPOR.

Bryonia, DRYNESS OF SECRETIONS versus a COLLIQUATIVE STATE.

Calcarea carb., OBESITY versus EMACIATION.

Sulphur, EXCESSIVELY BUSY MANNER versus LAZINESS.

These processes of study are perfectly in touch with all others, affording assistance to all, hindrance to none.

The subject may yet be viewed from a variety of other standpoints, helpfully; but in this place emphasis may again be laid upon the only one of these which can never be spared—that of *von Bœnninghausen*. His analysis of "the totality of symptoms" may appear to some very mechanical, but it is the basis of arrangement of his indispensable repertory. To recapitulate, its numerous divisions constitute four essential parts, viz.:

1. "Location" (of symptom).
2. "Sensation" (or "kind of pain," or "of symptom").
3. "Condition" (of aggravations and of ameliorations).
4. "Combination" (or "concomitants").

Added to these is the final one of "relationships" (or "comparisons").

Great refinements and minutiæ are possible and valuable under every one of these heads, and thus the all-important *individualities* of both the person and the drug are to be discovered and to be matched, the one with the other; aided by carefully *writing* down all the phenomena, whether of a drug or of a patient, under these four heads, and in this order. A brief but attentive reading of the Materia Medica will give a strong impression of such refinements and minutiæ; and by parallel, simultaneous, comparative reading of similar drugs their *differences* will grow more and more conspicuous also.

The practical application of von Bœnninghausen's method has produced a vast harvest in the hands of our pioneers; as, von B. himself; his pupils, Carroll Dunham, Ad. Lippe, and others, as well as Hering, Guernsey, and many more.

The free use of this or of some similar repertory will greatly facilitate the selection of the remedy and will gradually give large and rapid mastery of cases and of the Materia Medica. However, a word of caution is here needed, to wit: a repertory, after all, is but a disjointed catalogue (classified, it is true) of symptoms. It scarcely shows the *perspective* of anything; this can be found only in the Materia Medica proper. But we find the greatest usefulness in both when we employ the repertory as a simple *index* to the Materia Medica, and so economize precious time and energy in our work of selection or of *a priori* study.

For bedside use, a "repertory of modalities" (of "conditions" of aggravations and ameliorations)—after von B., a very little book—often gives great help to one who already has a good general knowledge of the remedies of our school. It can be carried in the medicine case or pocket, and attracts little if any attention or criticism.

Drug-Affinity for Organs and Tissues.

It is most interesting to note the apparent proneness of divers drugs to display their effects—each, in its own peculiar way—in certain organs, in the first place; as, *Mercury*, *Chelidonium* and *Nux vom.* in the liver; *Phosphorus* and *Tartar emetic*, in the lungs; *Belladonna* and *Gelsemium*, in the brain; etc. Attempts have been made to select remedies by this crude relationship, for the cure of diseases, under the name, "Organopathy." But this is altogether too general a method to answer the *precise* demands of the sick organism, and is now little more than a tradition among us.

Tissue-affinity of drugs is, however, usually recognized; as *Calc. phos.* for bony tissues; *Bryonia* for fascia, etc. One argument, indeed, against Organopathy, is that no one drug can meet the needs of any one organ, since it contains a variety of diverse tissues, each requiring a distinct remedy or remedies, when inflamed, for instance; and besides, as the organ has its *nervous supply* from a plurality of sources, a plurality of nerve-remedies at the same time contend for the choice.

Hausmann and Schüssler have elaborated this subject. (See, in particular, Schüssler's *Twelve Tissue Remedies.*)

Constitutional affinities are another branch of the same. Grauvogl's work on Homœopathy is largely occupied with its development. He recognizes therein, the composition of organic bodies, from carbon, nitrogen, hydrogen, and oxygen—the human body, in particular. The excess of some element or elements, or deficiency of some other (which results the same way), is largely the basis of disease, or at least, is commonly coexistent with it, and modifies both it and its treatment. In short, pathology is sustained, and therapeutics is applied to cure, alike through the channel of such constitutional conditions.

According to Grauvogl, these are to be placed in three classes, according to the predominance of elements, viz:

1. The *carbo-nitrogenoid* constitution; (the non-eliminative; "*lithæmia*") *Sulphur* is its drug-type.

2. The *hydrogenoid* constitution; (the flabby, watery; "*hydræmia.*") *Natrum sulph.* represents this.

3. The *oxygenoid* constitution; (the inflammatory, combustible, febrile; the emaciating, wasting, consumptive). *Ferrum* is its type.

Other classifications there are, but this must here suffice. Grauvogl's work is accessible, and should be studied, in this connection.

The Sides of the Body and their Drug-Affinities.

Nothing in Homœopathy appears more fanciful, to the ordinary Allopathic mind, than our claim that drugs show a preferential relation to one side of the body and its parts, or to the other. On the other hand, nothing is better established in fact.

Theoretically, and *a priori*, a clear diversity of sides should exist; since the superior nutrition of the right side should assure us of its positive electric polarity, with the left side negative. And so on; for the same is true of the front as compared with the back parts; also, of the inner parts, as compared with the outer; all normal flow of force being from within, outward. The same is true of the head as related to the extremities. The chemical nature of the secretions at positive and negative poles is characteristically different—alkaline and acid, etc.

Again, the sides of the body are vastly influenced, in sensation and function, by the asymmetrical location of the internal viscera.

Thus, the liver is located mainly on the right side; and the *right shoulder*, as is well known, is the special seat of its sympathetic pains.

Now, everybody knows that certain drugs "act on the liver," specifically; and necessarily, such drugs have a marked pathological symptomatic affinity for the right side. A marked instance is found in *Chelidonium*.

Once more—the heart is located mainly in the *left* side of the chest. Strongly related to this organ and its surroundings and sympathies, is *Lachesis*—a serpent poison. Necessarily, therefore, *Lachesis* is, so far forth, a "left-sided remedy," in the upper part of the trunk, at least.

All of these affinities are given clearly, in Allen's *Bœnninghausen's Pocket-Book*.

At this last point, however, a new element appears. *Lachesis* also affects the liver, on the right side, and below the heart-mass, and other left-sided upper organs with which it clearly affiliates, as the tonsil. Dr. Hering, in view of the *spiral type* of all living forms, saw in this, only a natural continuity of structural relationship, and expressed it by the formula—"upper left, lower right." *Rhus*, on the contrary, is "upper right, lower left."

Again, *Belladonna* shows, in nearly *all* organs, a preference for the *right side*. *China*, in like manner, for the *left side*.

All "antipsorics," the cardinal remedies for "psora," the principal "chronic miasm" of Hahnemann, appear to develop their symptoms *from within, outward*. Indeed all the chronic drugs, used against the three poisons—"chronic miasms"—of syphilis, and sycosis, or gonorrhœa, as well as psora, are by Hahnemann required to have this same peculiarity. *Sulphur* is the type of the antipsorics; *Mercurius*, of the anti-syphilitics; *Thuja*, of the anti-sycotics.

On the other hand, *Psorinum*, the virus of psora, works from without, inward; and hence, seems scarcely suitable as a genuine anti-psoric.

Lastly, some drugs exhibit a tendency to act, mainly, but with exceptions, from above downward; as, *Belladonna*. Others, from below, upward; as, *Aconite*.

Symptoms moving either upward or inward, are held to be of similar, and grave import; those moving downward or outward, as

of similar and salutary tendency. Allied to the former, is the approach to "noble organs," or to the mind; comparable with the latter, those symptoms which recede therefrom.

Dr. Hering was, after Hahnemann, the greatest exponent of this profound subject, in our ranks.

The *course and direction* of pains and other sensations, and of advancing anatomical lesions, is very characteristic in many cases. Thus stitches running downwards in the sacrum and thighs, of *Kali carbonicum;* tonsillitis, extending from right to left, *Lycopodium*; from left to right, *Lachesis.* From his intimacy with the provings of the latter, Dr. Hering inclined to the opinion that sometimes, at least, this, the *therapeutic* indication is *opposite* to the facts in the proving; and that similar symptoms, in the same locality, or region, but opposite in direction, are the truest types of Homœopathy. *Similar undulations of force,* in diseased tissues and drugs, travelling in opposite directions, being the true *similars, versus identities.*

On the other hand, Dr. R. R. Gregg, in his valuable *Illustrated Repertory*, figures, for therapeutic use, the courses and directions of stitching pains in the trunk, just as stated in the provings; and gives many instances of successful application thereof. This question is still *sub judice.*

Special Pharmacodynamics, or Materia Medica.

Part V.—(Jahr, Allen, Cowperthwaite, etc.).

The work of this part, during a limited term of teaching, differs from the course of study required by the studious practitioner, mainly in extent; the method is the same in both cases. With the latter, also, the considerable number of classifications, generalizations, etc., published and unpublished, and which some of our thinking men have proposed, are entitled to a fair consideration; as Hausmann's, Grauvogl's, Schüssler's, Morgan's, etc.

As to the students' course, it is important to bear in mind that Part IV. is fundamental and preliminary to this. Later, it consists mainly in the selection of a limited number of leading and familiar drugs, such as those already quoted under Part IV., and others, known as "polychrests" (or drugs of many uses), and *applying all that has been said to each,* in this way securing the most striking picture of each.

This being done for any two *very similar drugs* of the list, there remains one more essential proceeding, viz., *comparison.* This is performed in two ways. First, copy, or otherwise select, those symptoms of either which are most emphatic in the proving; also, those which are the most monopolized, or most characteristic of, the drug. A symptom, characteristic of one drug, and not found in any other, is termed a *unicum.* Then, with the Repertory, and with other provings, search, among these, for the remedies having either strikingly similar or strikingly antagonistic symptoms, or both; mark upon the margin opposite the words: "Compare with" and "Opposite" (adding the abbreviated names). Lippe's *Pharmacodynamics* represents this plan. Dr. H. C. Allen is the author of a recent reproduction of this.

The second method of comparison consists in writing the symptoms, especially the emphatic or characteristic ones, of the two chosen drugs, in parallel columns, upon foolscap paper, under the usual rubrics, and in such a way that those opposite to each other shall relate to the same subject, and shall thus display their similarity or antagonism in a striking and practical way. In this arrangement, the usual *anatomical* order of the Materia Medica as prescribed by Hahnemann, is the most convenient. Gross's *Comparative Materia Medica* is the type of this method. Lippe, Hering, Morgan, Farrington and others have extended the work, and in journals, etc., have further illustrated the method.

The *Materia Medica* of A. Teste, M.D., of Paris, translated by Hempel, but now out of print, is a good example of the comparative method of study, upon Hahnemannian principles. Recent studies of *Epiphegus* and of *Latrodectus*, by Dr. S. A. Jones, are also models in their way; having a pathological bent (*American Homœopathic Observer*, etc.).

The "clinical method" of comparison, herein discussed (see *Therapeutic Symptomatology*), and also Bœnninghausen's last division, "Relationships," may here be added.

The literature of our Materia Medica is now ample. The works of Drs. C. Hering and T. F. Allen stand first, without doubt. Next, that of Dr. A. C. Cowperthwaite. Many of the older physicians still rely upon Jahr's *Symptomen Codex*, and Lippe's work; Hering's *Condensed Materia Medica* is satisfying to many of the juniors.

The *Pharmacodynamics* of Dr. Richard Hughes, like his *Thera-*

peutics, is well suited to those who, having a knowledge of Old-School medicine, but believing in Homœopathy, seek to enter upon its study and practice, as novices.

Clinical Therapeutics.

PART VI.—"*Clinical Therapeutics*," or the "Homœopathy of Experience."

Here, as always, Hahnemann and his *Organon* are first. His *Aphorisms of the Treatment of Chronic Diseases*, collected by Dr. S. Lilienthal, and published not long before his death, in *The California Homœopath* (1889), under the title, *Catechism*, is of great importance, and should be printed in book form. So also is the first volume of his *Chronic Diseases*. All invite and deserve careful research and study.

Again, an essay upon his teachings, by Dr. C. Hering, entitled, *Hahnemann's Three Rules*, is of immense practical value. It was published in volume one, number one, of the *Hahnemannian Monthly*.

Verification of Provings is a leading part of our clinical study. A certain amount of skepticism of the reliability of the pathogenetic records prevails, and is natural enough; whilst, in a convert from ancient medicine, it is ofttimes both debilitating and painful. All evidence of the truth of these is therefore of the greatest value. Every symptom and symptom-group confirmed at the bedside by successful practice thus becomes a permanent addition to our therapeutic wealth.

In connection with the question of *reliability* of symptoms, in our Materia Medica and Repertories, most physicians doubt the "pure provings," as to which symptoms are due to the drug under trial, and which to the environment, or, above all, to the subjectivity of the prover. This is quickly answered; *every* symptom in a proving is a composite of *all three* of these factors, in varying proportions. But so, also, are the clinical symptoms, in every case of disease we are called to treat; and the "similarity" of the curative drug must be found in *all* of these three lines, if we arrive at the *similimum*. Lack, in either line, impairs the validity of the selection. Even the very personal traits, the texture and color of skin, hair and eyes, are significant; much more, the passing sensations, even if trivial.

Secondly, other skeptics are concerned as to the inclusion of symptoms in the Materia Medica and repertories, which, being observed in the sick, have disappeared after the remedy under consideration has been taken. This question is to be settled only by critical observation. Our best and most experienced prescribers testify that so far from being deceptive or unreliable, these symptoms are often of the most characteristic nature. That they have *not yet* appeared in a proving does not invalidate this, and this appearance, some day, must be expected.

Dr. Hering humorously said: "Such symptoms are like children, well born, but coming into the world by a breech-presentation."

Thirdly, other skeptics insist that either class of symptoms, if separated from their natural and observed grouping, and succession, are meaningless and useless. The answer is, that in pathological studies this is partly true; but that pathological studies are inadequate in prescribing, and that we are largely dependent upon pure symptomatology, in its most primitive form, at the bedside.

At the last, the testimony of experienced prescribers must decide this question also. Hering, Bœnninghausen, Jahr, Lippe, Dunham, Guernsey and a host of others have found that this theoretical and æsthetical objection is unpractical and misleading at the bedside, and that such symptoms are valid, and do not disappoint the user of them.

"Cured symptoms" are recognized by most physicians as bearing the very best credentials, but only an abundant experience can enable one to say that in new and strange combinations, or even standing isolated, they remain true to nature, are true and essential segments of a natural whole, and are reliable in drug selection. Experience, however, is too unanimously in favor of this conclusion to permit of further doubt, with all deference to those highly esteemed colleagues who hold the contrary view. Not yet found in a proving in a healthy body, Nature's law predicts and requires that some day they shall so appear; and if already in a pure proving, also, the evidence becomes final.

Rank of Symptoms.—One of the practical difficulties encountered in the practice of Homœopathy is the maze of symptoms, seemingly of equal value, of which every "totality" is composed, both in the chronically sick and in the provings—the materia medica. There

are three methods, or systems, in vogue for the practical solution of this difficulty. Individual physicians combine these, at will:

1. The pathological method, in which the provings are subjected to diagnostic grouping in advance, and the symptoms of the patient after similar diagnostic and pathological collation are compared, as a whole, with the pathological symptom-groups in waiting in the materia medica.

2. The key-note or "characteristic" system. The latter term is Hahnemann's own. The former phrase is, to the disease caused by any drug, somewhat as is the word "pathognomonic" to an idiopathic disease; *it names the drug;* subject, however, to exceptions. In other words, it is *super-characteristic:* it stands at the head of the characteristics of that drug, with which the whole *drug-tune* harmonizes, and is almost always found in the cases cured by that drug. And it is often irrelevant to any noble organ; is, indeed, often trivial, apart from its drug identification. We owe the term and its application mainly to Dr. H. N. Guernsey.

3. The system of *graded rank* of symptoms. Thus, of all clinical indications, the highest rank is conceded, in a general way, in acute cases, to the *latest symptom.* In chronic diseases, however,—not their acute outcroppings, which resemble other acute cases, and include recent drug-effects—in pure and simple chronic errors—the highest rank belongs to the long-suppressed skin affections, believed to be the root of the whole. After these, the symptoms of the noblest organs take rank and precedence in the picture – the "totality."

Lastly, the *psychic symptoms*—intellectual, moral, and emotional, with the will, plus and minus, outrank, *ceteris paribus*, all others in both acute and chronic diseases.

Heredity becomes, often, the ranking indication for drug-selection and for hygienic measures. And it is here needful to say that, in the view of modern pathology, the scrofulous taint, a form of "psora," is little else, to use the phrase of Dr. F. F. Maury, than "quarternary syphilis." The skin-clinic of Professor Duhring, in the University of Pennsylvania, has confirmed this view, to which he assents. A child, born with syphilitic pemphigus, for instance, and "cured" by routine treatment, reappears at two and a half years of age with scrofulous sore eyes, etc., no other known ætiology existing.

Pregnancy—the ante-natal period—is the right time to begin the

cure in such cases, judging of remedies by the symptoms of the mother, and of the other children if any there be, and of the father also. After birth, continuous and strict Homœopathic auspices are necessary to fit the young person to produce healthy offspring, and to live in health to old age.

Ante-natal treatment of a child is also the mother's opportunity; for she, herself, is the prime field of curative activity, in which her child, as part of herself, simply shares.

In girls and boys, the ages of teething and of puberty, and the years, more or less, before and after these periods, offer special opportunities of constitutional and radical treatment by the methods of Hahnemann.

All of these are in the line of physical evolution. The age of involution, also—called, in women, the climacteric—is truly held to be "the critical age," when chronic taints, with special symptoms, often seek to reassert themselves. Then, we should be prepared to give them the *coup de grace*.

Nosodes; "Isopathy."—The virus of any disease producing such material, according to Dr. Hering and others, is, when potentized, a similar, not identical, remedy to the same. Others insist on the identity; hence reject this sort of therapy as *isopathic* (*isos*, equal; *pathos*, disease). Hering, however, by proving these on healthy persons, established their right to a place in the Materia Medica and defined their particular indications; for instance, *Lyssin*, the attenuated virus of hydrophobia, which has a wide therapeutic range (see *Guiding Symptoms*). *Tuberculin*, too, is our ancient possession.

Dr. Samuel Swan, not hesitating to push this idea, extended it, with provings, to preparations of milk (*Lac*), human and other; to beef (*Carnis bovis*); to sugar (*Saccharum officinals*); to oatmeal (*Avena*), and many others; given *versus* cravings, repugnances, and ill effects alike; asserting great clinical success.

Typical Drugs.—Whilst individualization is the invariable duty of the physician in treatment, it is restful and helpful always to initiate this mental process from an anchorage in the consideration of a few pathological drug-types; thus in dysentery one must instantly perceive the type in *Nux vomica* and *Mercurius;* in pneumonia, *Bryonia*, *Phosphorus*, *Tartar emetic*, etc.; in acute fever, *Aconite;* yet none of these may be finally selected. Nevertheless,

they serve as fixed points whence we can the more readily proceed in comparison and differentiation.

A small *Domestic Practice*, by Samuel Morgan, M.D., may be recommended to beginners for this precise purpose. It can be carried in the breast-pocket.

Special Drugs.—Two common drugs (and doubtless many more) are of special interest, owing to the fact that they cure, on the one hand, certain perilous states, and, on the other hand, they severally control some common and troublesome but merely inconvenient conditions. These two drugs are *Aconite* and *Gelsemium*. *Aconite* is the remedy for profound, acute congestion, even with loss of consciousness. It also cures nervous anxiety, unwillingness to tell symptoms, omodynia, etc. *Gelsemium* cures scarlatina, with stupor and sudden outcries from ear-pains; also mild but active delirium in typhoid states. Again, it helps in neuralgia of the cervical plexus, in gastralgia, and in alcoholic and other forms of insomnia, viz., the "wide-awake" kind.

These two drugs often follow each other very well, and so are especially "complementary." They outflank and overlap the spheres of many other drugs, performing their *apparent but mistaken* duty. Thus after failure, in children's diseases, of *Chamomilla*, *Bryonia*, *Podophyllum*, etc., *Aconite* has repeatedly cured. Years ago, Dr. C. J. Hempel so taught; but he wrongly substituted *Aconite*—mother-tincture of the root—for proper attenuations of true curative and "similar" drugs, and reaction and neglect followed. *Gelsemium* often supersedes *Mercurius*, *Pulsatilla*, etc.

Yet another drug deserves a special place, viz., *Mercurius*. Most of its uses are well known. One, little if at all recognized, is in that mild but depressing periostitis which remains often after internal diseases. The ribs, the bones of the head or face, the coccyx, or the edges of joints, are tender on pressure with the thumb-nail. *Mercurius* cures.

Hering's *Analytical Therapeutics*—particularly its sections on "Mind," and on "Typhoid Fever," are types of Homœopathic clinical study. Hering's and Horne's Materia Medica cards or similar ones, home-made, are partly "clinical" in origin and character, and are very helpful for self-quizzing; having characteristics printed or written on one side, and the name of the drug upon the other.

Farrington's *Clinical Materia Medica* is substantially Dr. Hering's teachings interpreted and extended by an able, young and enthusiastic editor. Happy it is for Homœopathy that he lived and taught and wrote!

Dr. Carroll Dunham performed a similar office for his teacher, von Bœnninghausen, besides much original work. His *Homœopathy, the Science of Therapeutics*, is one of our "sacred books."

The Pocket Repertories, both of Jahr and of Bryant, quite diverse in plan, and now nearly or quite out of print, were exceedingly useful. Jahr's *Clinical Guide*, so-called, is founded upon the former, edited by Dr. S. Lilienthal.

Lilienthal's *Clinical Therapeutics* is an extension of the *Guide*, so far as concerns the detail of *known* drug indications, in particular diseases; is thus well-suited to recent converts, and to beginners generally. A repertory of the "symptoms" is greatly needed.

Hering's *Guiding Symptoms*, in ten volumes, is the most complete and reliable summary of Homœopathic experience and of verified provings, in existence. Among our English colleagues, the method itself is disapproved; they preferring pathological interpretation and application of provings; but to symptomatic prescribers, it has proved an essential aid. The author was, through life, wont to record the symptoms of his cases and when these disappeared after a *well selected remedy*, that fact was noted by means of his colored pencil. In constructing his book the varying phraseology of many different patients in describing the same symptom, has been largely preserved; enabling the reader to study drug characteristics from so many sides, as to give assurance of exact meaning in each instance. For example, see the "rattling respiration" of *Tartarus emeticus*, in this work.

Now whilst this method is, as already shown, not above theoretical and scientific criticism, it is, to some mental organizations, indispensable. Therefore, let us be devoutly thankful for its existence.

Dr. T. S. Hoyne's *Clinical Materia Medica*, after the plan of Renckert's *Therapeutics*, affords a vast mass of experience, which might now be much extended. Such books ever need an *Index and Repertory* to be quite available. Allen's *Index* is often essential.

Hale's *New Remedies* contains much valuable, but largely empirical information.

Raue's *Annual Record of Homœopathic Practice;* also his *Pathology and Therapeutic Hints*, afford a rich field of clinical study.

Guernsey's *Keynotes* are invaluable, notwithstanding all objections.

Johnson's *Therapeutic Key* is really a condensed pocket summary of all the authorities, and its many editions prove its necessity.

Our numerous monographs on special diseases, of which the type is "Bell on Diarrhœa," etc., are justly held in high esteem.

Gentry's *Concordance Repertory* affords a rapid alphabetic reference to clinical and proving symptoms, and their remedies.

A number of systematic text-books on Practice, Surgery and Obstetrics, are published within our ranks, and are worthy of attention.

The Repertories and the Materia Medica are here, as everywhere, in place.

Lastly, our numerous journals, and society Transactions, are full of therapeutic experiences of moment, which may well employ the leisure of post-graduates, in turn with other literature.

True Homœopathy has nothing to fear, and everything to gain by clinical study.

Besides "Bell on Diarrhœa," etc., we have others in the field of the *Specialties;* on the Nervous System, the Eye, Ear, Nose, Throat; Genito-Urinary Organs; Diseases of Women; of Children; of the Rectum, Hemorrhoids, etc.

Diagnosis has too much hindered our progress here, by apparently demonstrating lesions hopeless of medical cure; but the Homœopaths of forty years ago *must* have cured them; for these patients had a wonderful fashion of getting well. Membranous dysmenorrhœa, ovarian tumors, endometritis, cancer, etc., *were cured.* Just before the death of Dr. H. N. Guernsey, a great cure of the first-named malady was effected by me, through his counsel; and I have witnessed much more of the same kind, and so have others.

Original Work.—Such work as this is identical with that of the founder and the pioneers. Expressed in scientific form, it belongs to the department of *Original Work!* This it is that has furnished to indolent and mercenary doctors, the clinical material of our School, the so-called "usual symptoms," by which they always hasten to their prescriptions, and earn their money; and which are literally their "stock in trade;" they being personally incapable of the said "original work;" and who habitually sneer at their benefactors.

The *Cyclopædia of Drug Pathogenesy*, a condensed, synoptical work, recently published by the joint efforts of the British and American national societies, supplies a former lack in this line, and with its Repertory will undoubtedly advance us in the future without superseding older books.

Reading Between the Lines.—This is a common exercise of the human intelligence, since not all things are as they seem. In the repertory and in the Materia Medica, interpretation is often needed, in order to get the just meaning of a symptom; it may say too much, or too little. Rash interpretation must be avoided, but the mind should be on the alert in this way. For instance, Dr. Lippe complained to Bœnninghausen that "aggravation by wearing the hat" was not to be found in the extant edition of his *Pocket-Book*. His reply was: "Yes, it is necessarily included in 'worse by covering the head.'" *Such* reading between the lines is always in place.

Again, *Gelsemium* produced intestinal symptoms under depressing excitement; but it has been successfully applied when no intestinal symptoms were present.

Dr. Hering, being a Swedenborgian, laid stress upon a branch of this subject, falling under "the doctrine of correspondences." A special thought of his was, that certain persons correspond to, and represent certain animals of known physiology and habits and symptoms. Thus, a hog, human or other, will grovel in the dirt; and *Sulphur* presents a physical, and hence, a psychical affinity to both, and thus a physiological and pathological adaptation to both. Again, long before Schüssler wrote he has said, "Wherever an inorganic substance exercises a physiological function in the nutrition of the tissues, there it is sure to be an important remedy in sickness." (*Sulphur* in all albuminoid tissues.) He compared people who cannot vomit with the horse, which also cannot vomit. In the language of Evolution, this kind of correspondence would be called "physiological homology." Hausmann, Schüssler, Grauvogl, Morgan have pursued this subject in old publications.

Dr. Samuel Freedley informed me of his curing himself of an "old man's ulcer" of the leg by *Tarantula cubensis*. I reasoned that an animal so low represents degraded human tissue, and is homologous with low disease-changes. Hence I have used *Cimex* with benefit, in ulcer of the rectum, and *Apis* in gonorrhœa, etc. All of which is "reading between the lines."

The germ-doctrine as related to Homœopathy has agitated many among us. The first impression of such was that it might render infinitesimal doses in germ diseases absurd, indeed, and that the rational treatment of such diseases must needs be germicidal. Diphtheria, in particular, was the field of conflict; for the Hahnemannians held their ground by faith and cured their cases, as before, with the similimum.

The latest light of bacteriological science fully justifies them. It is now determined, firstly, that, internally at least, germicides are improper; secondly, that healthy blood-serum and other fluids of the body destroy the life of the disease-germs, and that then the white globules devour and digest them; thus, thirdly, the one thing needful above all else *versus* germ diseases is to maintain or to restore the vigor of the organs and tissues which generate these germicide fluids and globules continuously during life. This is the special office of Homœopathic medication, supplemented by hygienic care. Doubters may now rest in peace.

The "orificial philosophy" in medicine. The surgical successes of this new element in the healing art have done much to divert Homœopathic *physicians* from their own specialty and to aid in the dominance of "the surgical epoch." This is scarcely necessary. Many orificial lesions are still amenable, as they have always been, to Homœopathic remedies skillfully chosen and administered.

Our present concern is the recognition of the inlets and outlets of the body as special disease *foci*. An old doctrine is here brought prominently into view but in a new dress, in a new light and with great extension, viz., vital *sympathy*. Not alone the sympathetic nervous system, but the spinal reflex system as well must be considered in this philosophy; and both not only as to the motor reflexes, but also as to reflex sensation and functions, and trophic or nutritive reflexes affecting the most remote and diverse tissues and organs.

In looking over our written notes of former cases we are struck with the many *anomalies*—not always paralleled in the Materia Medica—in all these particulars which have distressed the patients and distracted the doctor. And now the orificial philosophy has come to teach the profession how to grasp and utilize these and give them a natural grouping; to "read between the lines" in this new direction, and to aid the Homœopathic physician in exposing

the occult "totality of symptoms" to objective recognition by eye-tests, by the rectal speculum, and by all the modern methods of *examination*. Methinks Hahnemann himself would delight in these were he with us, and would insist that our drug-provings be perfected by like means, that our selections might be more and more precise. No one more than he has valued positive objective demonstration of morbid alterations, but in his day this was sadly restricted by the limitations of general knowledge. Let our future prescribing intelligently reflect our present advantages!

"*Treat the Patient not the Disease.*" This dictum of the pioneers, now classic, is distinctive of *pure Homœopathy;* which, however practical exigencies may seem to cause any to depart from it, is the only possible "point of departure," as navigators phrase it, and it is ever in view, also, as "the returning point," as rhetoricians say.

It is justified in two ways: Firstly, by the fact that "totality of symptoms" means *the whole man*—nothing less. Secondly, that, like a derelict householder, the man is the *sustainer of a nuisance called disease*. A municipality does not itself, usually, abate a nuisance, but calls upon the householder himself to do so. Homœopathic solicitation of the living organism, or its "vital principle," does the same thing as to every particular disease. The attack upon disease, *per se*, savors of surgical coercion.

This may, indeed, be needful at times, but should never be confounded with *medical practice* proper. It is wholly exceptional. The pure medical idea, we repeat, is purely Homœopathic.

The Medical Idea, in the *Treatment* of *Tumors;* of Intestinal *Worms;* and of *Parasitic Skin Diseases.*

This is largely a matter of "treating the patient," rather than the disease; for, although local sensations and objective appearances have much influence in drug selection, nevertheless, these are still only *emphasized* voices in which we hear that of the *suffering vital principle*, as Hahnemann would say; the witnesses of the error of the whole living man. These, together with the "generalities" and mental symptoms, can point out to us the lines on which "Homœopathic solicitation of the imperial vital principle" may be offered, and by which nature's curative reaction may be received.

In a word, our business is, to make the living soil so healthy and resistant that it will no longer afford a nidus for the tumor or the

parasite. In all germ diseases, likewise, this is the aim, and this the successful practice, of the genuine Homœopathic physician.

Our *surgeons*, in the old days, realized the vast superiority of our law and our remedies in the after-treatment of wounds, accidental or operative, and of "surgical diseases," so-called; and the excellent work of Dr. J. G. Gilchrist, entitled *Surgical Therapeutics*, illustrates their practice. To-day, however, it must be confessed with shame that surgical therapeutics is the same, almost, in both schools, and that, often, our surgeons mildly resent, to the detriment of their patients and of their statistics, all suggestions of "Homœopathic purity," and, particularly, of Hahnemannian individualization.

The sources of surgical progress in the old world are, also, the tyrants of surgical therapeutics, and their dicta are, by both schools more or less, regarded as final. The remedy for this lapse, on our part, is to establish, in all our surgical hospitals, a rule of therapeutic consultations, in all cases, with competent exponents of sound Homœopathy.

Contra-indications of Remedies.

Drugs may be deleterious to the organism, even in homœopathic doses. It follows that in certain cases, where the chances of life are already very slight, that use of an unsuitable drug may even prove lethal. It is important, therefore, to study this matter well.

1. Too great persistence in giving the right remedy, also too material doses, impose too much of the "primary effect" thereof upon the living body. High potencies may overdo, in the general sphere of the organism, and in the nervous system.

2. Persistence with one potency beyond the show of vital reaction may retard this; whereas a change of potency, higher or lower, may revive it.

3. Giving a drug suitable to the leading local symptoms, but unsuited to the *temperament*, often does harm. Thus in a fever, with drowsiness, suffused eyes, slow motions, crimson color of the whole face to the hair and the ears, *Gelsemium* is indicated, not *Aconite*, nor *Belladonna;* and both of these are contra-indicated.

And if the patient is anxious, restless, thirsty, sure of speedy death, etc., neither *Gelsemium*, nor *Belladonna*, but *Aconite* is suitable.

Or if he is hasty, audacious, maniacal, with sudden notions, and dry, throat, all but *Belladonna* are contra-indicated.

4. Some drugs are contra-indicated by the nature of the existing *morbid process.* Thus blood-poisoning, typhoid or other, has little in common with the sthenic *Aconite*, but calls for *Gels.*, *Bapt.*, *Rhus*, *Bryonia* or *Arsenic*, asthenic drugs. The first is, hence, usually contra-indicated in the height of typhoid fever. Teste points out that drugs are likely to suit best the temperament and the diseases of mankind, in their own habitat. *Aconite* is a mountain drug; *Gelsemium* growing in low, damp, warm, and malarial districts.

5. Symptomatic antipathy, of course, is always a contraindication.

6. *Inimical drugs* are such as do not follow each other well—as, *Apis* and *Rhus; Phosphorus* and *Causticum*—and exert, thus, bad effects, and so are contra-indicated. (See a pamphlet on this subject by Charles Mohr, M.D.)

Dosage.—As an addendum to this part it is needful to refer briefly to the question of dosage.

The "minimum dose" of Hahnemann is a relative measurement only, and means "the smallest dose sufficient to cure;" and this measurement must be determined by each physician for himself and for each individual case separately. In general, we may accept the empirical formula, viz., "all drugs have double and opposite properties and effects, according as the doses are large or small," and admit that the former show dominant primary or "physiological" effects, the latter dominant secondary or opposite effects. From this vantage ground we may consider the neutral point between these and both extremes.

Management of Remedies and Dosage.—A few detailed suggestions on these matters, as seen in daily practice, will, doubtless, be acceptable. And in the first place, it should be said that in acute diseases both high and low attenuations are effectual; but that the more extensive the anatomical lesion the more solid the affected organ, and the greater the degree of tissue alteration the greater the tolerance of the low and even of the lowest. On the other hand, the less extensive the lesion the less solid the tissue affected, and the less the tissue-change—in short, the more purely functional is the malady the more needful are the highly attenuated preparations. Also, the personal sensitiveness is a leading reason for corresponding dosage. A *plus* of this demands the higher; a *minus*, lower.

Recent intermittent fever does well on low attenuations, as of *Gelsemium*. Confirmed cases demand the higher, *e.g.*, the thirtieth centesimal and upward of *Bry.*, *Puls.*, *Nux v.*, *Natr. m.*, *Ars.*, etc. The lower attenuations (1x to 6x) are usually repeated in hyperacute disease very rapidly, say, five to twenty minutes. In common acute cases hourly, or oftener, "until an impression is made," *i.e.*, until distinct and positive improvement is noted; then, less and less frequently—"tapering off," as it has been called, as the lesion subsides with the symptoms. But if, instead, an "impression" of aggravation sets in, due to the drug, a higher potency is given, provided the *symptoms* still indicate it; but if these have changed, and the lesion remain unsubdued in great part, then a re-examination and a new drug are in order. If every prescription aggravates the symptoms and the lesion be in abeyance, and if, besides, the *vitality* be better, all drugs should be stopped and a placebo or else nothing be given; permitting, now, the "secondary vital reaction" to occur, without the least interference, *so long as improvement continues.* "Improvement" recognized, even when it is as yet limited to the psychic sphere, the physical is sure to follow, duly.

In subacute diseases the doses are given about three times a day for a week; although some physicians repeat much oftener if the system tolerate it, even in chronic cases. Change of symptoms is met by change of the drug.

Low attenuations in chronic diseases are repeated once, twice, three or more times per week. Sometimes, if *counterbalanced* by obstinate lesions in *similarity* with the drug every three hours has been borne, *e.g.*, *Rhus tox.* 6, in cutaneous syphilis, continued some months, with *Bryonia* as an intercurrent remedy for "muscular pains."

High potencies (attenuations) are usually given more sparingly. In collapse, after exhausting disease, one dose only can be endured. *Per contra*, in early cholera, etc., every five minutes to twenty minutes. In acute diseases, sometimes, a single dose will carry the case to the curative reaction. But better work is likely to be done in such cases by some repetition; *e.g.*, three doses, one hour apart; or four doses, two hours apart, and if, after an improvement, exacerbation occur, repeat and give six hours apart. Six, instead of four doses, if the patient's organism be known to be refractory to Homœopathic remedies—also every two hours. This is often satisfactory in confirmed intermittent fever; sometimes, however, twelve doses

do better. The placebo is, of course, much used with the higher attenuations, or rather, commonly, after them, viz., *Saccharum lactis.* Much lesion justifies hourly doses for one day, or every three hours if less; gradually lengthening the intervals.

In subacute diseases two doses every second day, six in all, is well; but every night, or every second night, may be preferred if very gradual effects are sought.

In chronic diseases one dose may cure. Two doses are more emphatic, two to twelve hours apart. Or, three doses, one-half to one hour apart. Or, four doses, one every third or fourth night. Sometimes, as in tumors, a single dose, once in thirty days, as of *Sepia* or *Hepar sulph.*, has done good "alterative" work.

High Potency Aggravation.—Sudden increase of lesion and serious aggravation of symptoms in acute disease demands a placebo. If the drug were the true similimum the case will hold its own thereunder for about six hours, and then a rapid improvement, in every respect, may be surely expected. Such a case, however, should be faithfully watched!

In chronic disease a primary aggravation is a good sign, and usually lasts about three to four days; sometimes, however, one or more weeks; whilst the physician must stay his mind upon the assurance of his skillful selection. No repetition, of course, nor change of remedy is proper if this assurance be well founded. The secondary vital reaction is now his objective point, and at that point the cure becomes apparent as a coming event. (See Hahnemann's *Three Rules.*)

A word as to "*schools of practice.*"

A symbolic view of the entire healing art, with all of its theory and practice, may be had by taking a rod or wand and inscribing upon the two ends and the middle certain words, viz.: On one end, "coercion—surgery;" on the other end, "solicitation—medicine;" and on the middle "palliation" (including all kinds). "Practice" is addressed to living nature; *the surgical idea* is, *nature intending to go wrong;* our aim, *therefore*, is here wholly to coerce her to the will and subject her to the dictation and manipulation of the doctor. Sometimes—that is, in proper cases—she kindly consents; in all the rest she resents and defeats the effort. Not only the knife, but drugs also may do the surgical work, as emetics, cathartics, etc.; and the result is, as stated, still variable. This "surgical idea"

and its practice are, in one word, "Allopathy," as now before the world; and this word is hence to be written also upon the surgical end of the wand, with no offensive but with a purely philosophical meaning, of course, as originally used by Hahnemann himself.

Again, *the medical idea* is, *nature is striving to go right*, but is diverted by lack of proper suggestion, or stimulus, or solicitation; *the least sufficing*. The aim here is to recognize her *proneness* to cure; her *sole power* to cure; her need of suggestion, guidance, stimulus—in one word, of *solicitation*—at the exactly right point or points in the organism, as shown by the symptoms and under the law of similars. To this solicitation, in all curable cases, she responds and cures the whole disorder—restores the whole patient.

This "medical idea" and its practice are, in one word, "Homœopathy," as now known to the world; and this word is therefore to be now added to the inscription upon the medical end of our wand.

Lastly, the middle of the wand includes all that is not absolutely surgical or medical in the healing art, viz., dietetics, sleep, clothing, and the whole field of physical and psychical hygiene. "Poisoning" and its treatment belong properly to the surgical end; after-effects of *dynamic* sort to the medical end. But what further palliation is to be classified? Answer: All the "adjuvants," so called, of *medical* practice—non-medicinal applications, non-surgical expedients, etc.; and, lastly, the "similar remedy" itself may be considered. Old-school practice is so largely palliative that it seems fitting to call it *the palliative school*. But mark the difference! The palliatives of the latter are most characteristic upon the *surgical* or coercive *side* of this centre! Those of the Homœopathic school are *neutral*, *e.g.*, water, hot or cold, demulcents, etc. (as, powdered gum arabic, in moist ulcer of the nipple); as a rule neither medical or surgical, but if otherwise they are found upon the *medical side* of this centre! Indeed, Dr. Henry N. Guernsey used to assert that "the best palliative is the Homœopathic remedy!"

A connection may also be formed between the two lines of professional thought and experience by assimilating equivalent phrases in use by both. Three of these pairs are as follows: Our "primary effect" the other side call "the physiological action," and this is their main reliance. If this be subject, as in *Digitalis*, to sudden toxic excess the effect is ascribed to a yielding of resistance, owing to the storing up of the drug in quantity in the system; its victory

over vitality *then* occurring. Now, we see our minute doses do likewise, but in a mild way. According to our respective ideas, *they* entitle this phenomenon "cumulation;" *we* say, "drug-aggravation."

Again, in chronic cases, they give minute doses of *Iodine*, *Mercury*, *Arsenic*, etc., acting in a quiet, subtle way, not understood; they call them "alteratives." We say, "antipsoric," antisyphilitic," "antisycotic" remedies.

It is not to be inferred that either school of practice confines itself logically to its own end—its own characteristic field, or that truth and consistency demand that it shall do so. The correct principle is simply, to treat *medical* indications purely by Homœopathic remedies, with neutral palliatives, if necessary; on the other hand, to treat *surgical* indications accordingly, and finally, never to confound them. Physiological errors, and the resulting alterable anatomical lesions, always belong to the former class. The best treatment of "diseases" by the senior branch of our profession is, "Homœopathy, unawares," crude and mongrel-like, indeed, but recognizable. In our own school, the converse is too often visible; hence, this paper! All the malicious insinuations uttered against our loyalty will, however, fall to the ground whenever we ourselves shall sharply distinguish between medicine and surgery, as above.

In many painful affections people clamor for *a liniment*. I then prescribe, with good and innocent effect, the following: Alcohol, two ounces; Sweet oil, one teaspoonful. Mix in a *new* vial, with a new cork, and apply as needed.

Narcotics and other drug palliatives, germicides, and condiments, tobacco, *et id omne genus*, as a rule, do not prevent the specific action of well selected Homœopathic preparations; but they nevertheless may work evil in the system, each in its own way, independently of our drugs. Only, if they are *similars* to the latter they may have some antidotal effect.

A familiar instance of a Homœopathic remedy fulfilling its specific work, despite medicinal conditions and the like, and even in the face of the fact of "similarity" itself is seen in the unerring action of *Natrum muriaticum* or Sodium chloride, when prepared by attenuation or "potentization," notwithstanding the *crude* substance is in simultaneous use in most articles of food. This is a stumbling block to some superficial thinkers, but is easily explained, thus: the potentized drug, so far as *dynamic* activity is concerned, apart from

chemical and physical forces is experimentally found to be the superior; hence, the term potentization. The provings of *Natrum muriaticum*, already mentioned, have revealed this astonishing fact and established it beyond peradventure. *Silica*, *Aurum*, and the other *insoluble* drugs have added their confirmation.

A common Homœopathic experience is the *mutual* antidotal, or, at least, modifying power of the higher and the lower attenuations of drugs. Often, when a drug has acted in excess of equilibrium with disease forces a *change* of potency, in either the upward or the downward direction renews the good effect or abolishes a bad one, *i.e.*, "antidotes" it.

Dr. H. N. Guernsey, in view of this, was in the habit of treating chronic tobacco poisoning with *Tabacum* in high potency.

Pain and Analgesics.—Many "analgesic" drugs are now offered for our favor, but we cannot, with impunity, forget that only the *totality* of symptoms (pains included) can justify any prescription. *Pain* is the *second point* in Bœnninghausen's system of selection, and a rightly selected drug, duly regarding *location*, *kind* of pain, and the conditions of aggravation and amelioration represents a *specific* analgesic power, with which crude non-specific anodynes have no right to compete or to interfere. Thus it is that the best anodyne is the "similar remedy," and also the most prompt and permanent. Hot or cold applications, wet or dry, may be of *temporary* service, likewise satisfying clamors which, sometimes, cannot be put off; and they are not hurtful if properly managed, but they must be non-medicinal, as a rule, or, if medicated, it must be with the similimum, and the same remedy as that given internally.

Consider *Aconitum* for wound pain and any severe pain with distress, worry, feverishness, restlessness, and looking for death. *Chamomilla* when one must walk the floor, and can scarcely or not at all speak civilly. (Besides, consider the *whole* case.)

Soporifics.—Sleeplessness is another evil little tolerated by patients and friends. Indeed, it is devitalizing, *per se*, quite as much as is pain. Two principal kinds of proximate causes, I think, are responsible for it, and by *removing these* it may be controlled. Firstly, *physical discomfort*, as from heat or cold, general or local, hunger, thirst, uneasy position, or pain. Careful and minute diagnosis of such causes is preliminary to removal, of course. *Unconscious muscular effort*, often trivial, is a common condition of insomnia. Hold-

ing up the chin for free breathing is a common form of this; it should always be suspected and eliminated. Elevation of the head from the pillow for hearing or other purposes, if but to the height of a millimetre, suffices to keep one awake. Supporting a knee or even a finger will do the same.

The remedy is to "give way all," and *fall* asleep. One who has tried this proceeding testifies that its effect is always instantaneous. *Pain*, as above discussed, again requires consideration here in the same terms.

Secondly. *Mental preoccupation*, pleasant as well as unpleasant, is equally inimical to sleep. Hence, monotonous, dry reading, or grave, heavy, muffled, uncertain sounds, as of *distant* machinery or vehicles, are often soporific, whereas high, short notes tend to the opposite effect. That form which attends nervous alertness and tension and morbid attentiveness is here particularly referred to. *Gelsemium* and *Coffea cruda*, also *Kali brom.*, in potency, if no physical or other symptoms are superior in the case, are of the greatest service. If with malignant fevers, *Belladonna* or *Hyoscyamus* may supersede these at times. In insanity, *Kali brom.*, *Capsicum*, or *Arsenicum*, or, if with an *omnes admirari*, or else a *very busy* mood, *Sulphur*. In infantile colic, *Magnesia phosph.* In peritonitis, *Arsen.*, *Rhus*, etc.

With proper precautions, avoiding conversation and other noises in or near the room (particularly with sensitive infants, little children, and nervous people), and following the foregoing suggestions, there will be little wish to tamper with objectionable drugs. In this connection, be it remembered that fatal brain disease after "summer complaint" in infants usually happens as a sequel to using some form of opiate.

Bathing or sponging the feet, hands, face, head, etc., with water, cold or hot, as most agreeable; brushing the hair; gentle patting or stroking of the surface; any of these may help, if agreeable and *desired*, in certain cases. Rhythmic movement of one foot in bed, by a friend, has proved *very soothing* in "brain fever."

Constipation.—Full meals, full water-drinking, full exercise, and full opportunity for obedience to nature's calls, in spite of those of business and pleasure, these are the sufficient conditions of a good state of the bowels unless these be the seat of disease. In the latter case, of course, the similar remedy also.

Sick regimen, of course, generally means empty bowels, and they should, therefore, until convalescence, with resumption of eating, be mostly let alone.

In health, or when about the house, there must be no sitting down immediately after breakfast, particularly not in a rocking-chair. A walk, then, of five minutes, with the thoughts concentrated upon the intended evacuation, *excluding all other subjects* religiously. Then, ten minutes consecrated to the act itself, regardless of engagements of every kind, carefully avoiding reading, smoking, and all other diversions. This daily, with coarse-grained diet and the Homœopathic remedy, will often suffice. But sometimes this programme is impracticable, in which case use the so-called "gluten suppositories," which, really, are made of only cocoa-butter, containing the relics of the pulverulent cocoa itself, an important aid in the aperient effect, as it would seem. These may be repeated every night, or night and morning, or oftener, until success is attained. In a *few* cases the straining which follows may demand relief by a hot water enema, one and a half pints retained twenty minutes; repeated several times in the day, if needed, until regular action is established.

In very feeble persons, especially if stubborn in rejecting these measures, fatal collapse may follow prolonged straining. This must on no account be permitted.

In *surgical cases*, laxative drugs are not out of place, as prior to herniotomy, etc.

Debility.—Again, our patients, in convalescence or otherwise, often clamor for *a tonic*. Good food, well digested, is the real, permanent tonic, of course. Tender, rare beef, whole wheat-flour bread, oatmeal, plain maltine, good milk, cream, buttermilk, butter, fresh eggs, and unfermented wine—these are the type.

Sometimes these are declined. If so, *the best tonic* and appetizer again *is the similar remedy;* for instance, *China*, *Ignatia*, *Lycopodium*, *Natrum muriaticum*, *Nux vomica*, *Pulsatilla*, *Sulphur*, etc.

When, however, the debility is the most commanding symptom, this indication becomes a *leader*. Here several drugs compete, viz., *Arsenicum*, *Ferrum* (the acetate), and *China*, in the first rank.

Arsenicum, high, if the debility be out of all proportion to any attendant ill-health or lesion, with fear of solitude, desire for external warmth, <draft of air. One to four doses—all within six

to eight hours, or once every six hours, followed by *Saccharum lactis*—have often transformed the scene speedily.

Ferrum aceticum 2x, one-half grain, three times daily, *immediately* after meals, as recommended by Dr. Bayes, of London, is exceedingly useful when anæmia with debility seems to account for a stubborn resistance to "similar" remedies. Among the cases in which it has served me well I will specify those children growing tall, full of activity, which exhausts them and keeps them thin, susceptible, weak, and pale.

China.—When exhausting disease or loss of blood has preceded the debility, and perspiration attends the least exertion, <on breast and back.

The enthusiastic, practical, and successful cultivation of "the medical idea" implies a certain unfaith in "the surgical idea," and at the same time, a habit of subjective thought. Equally, on the other hand, the surgical idea displaces the medical, and its habit and its faith are almost wholly objective. The two are, at any given moment, psychic incompatibles—exclusive, dogmatic.

Either, however, is but *a mental bias*, not to be mistaken for absolute and universal wisdom, but understood to be a sharp limitation against it; yet, as being ever complementary, the one to the other, and both as being entitled to mutual respect and mutual sway. As in all other cases, man's gravest errors herein lie more in lines of denial than in those of affirmation. False affirmations soon correct themselves; but denials are easily maintained, and, however erroneous, are ofttimes incorrigible.

The general subject of *Antidotes* requires mention here.

Toxicology presents us with a series of chemical poisons, often corrosive or at least irritant, and with each a series of substances having the power to chemically neutralize it, or otherwise render it inert, insoluble, etc. Also, other substances, acting physiologically in antagonism to its after-effects. All are called "antidotes."

In Homœopathy we discover another sort which, on the contrary, antidote each other in consequence of the *similarity of their symptoms* in pathogenesis or provings. These we call "Homœopathic antidotes." Our older authors, as Jahr and Teste, made great account of these, and in the introductory portion of Jahr and Possart's *Repertory*, under each remedy are given its known Homœo-

pathic antidotes; also, those drugs which follow it with most frequent known advantage in therapeutics; and, lastly, those which it follows well; each being, of course, given singly. Such remedies, often completing a curative action already begun, are said to be (borrowing a term from mathematics) "complementary" to each other.

Nowadays, instead of direct efforts to *antidote* drug-aggravations, we *commonly* rely on the happy effects of these *sequences*, which practically accomplish the same end; always determined, as they must be, by the *totality* of existing symptoms.

After *Allopathic* medication, Prof. C. G. Raue advises to preface the Homœopathic treatment with *Nux vomica*, one or more antidotal doses, as already mentioned.

A strict adherence to Hahnemann's methods precludes the use of antidotes to Homœopathic remedies in great measure. Given the "minimum dose" without undue repetition, and the true similimum being selected, drug-aggravation means simply that the similar drug disease is supplanting, and, therefore, curing the original malady, and under a placebo the "secondary vital reaction" will, ere long, prove it. By no means, then, let it be antidoted!

The employment of antidotes, *whilst proving a drug*, is a great abuse, and goes far to vitiate the result, besides depriving the world of a full pathogenetic picture, *in all stages*. Young student provers, with college work to do, often thus destroy their own contributions to medical science. Moderation in dosage, with patient waiting, watching, and recording, is the solution of this difficulty.

In conclusion, we may say, that less than the following, as a college programme, is not in keeping with good faith toward Homœopathy, viz., in both the junior and the senior years, besides the complete didactic course a full series of *subclinics* should be included as a "specialty," in which a rigorous drill in the Hahnemann methods should be given by competent teachers and *practitioners* thereof; directing placards being also hung up, within view of all.

"Taking the case," selecting the remedy, choosing the dosage, and the succession of remedies, etc., writing records and marking them for subsequent disappearance, amelioration, or aggravation of symptoms and lesions, from visit to visit, should be taught to, and practiced by, each and every student.

Such a course of instruction would create, not slavery to Hahne-

mann, but a reasoning and experimental acquaintance with him, most essential to the true advancement of our cause, but which is, at present, the very least of the accomplishments of the average Homœopathic graduate.

A course of study, such as that above marked out, cannot do more than mere justice to Homœopathy in a full graded college course. Less than this is injustice to a holy cause—a sacrilege, in short.

Thus, we may realize how distinct is Homœopathy as a grand department among all others in a medical course, and, moreover, in view of its fundamental truth, how commanding and supreme in the presence of them all!

The institution of the four years' course for under-graduates, as well as of post-graduate curricula, I feel, calls for the immediate and effective interposition of our highest authority in behalf of its future!

Psychic Cure.—In presenting this subject I do but follow the example of Hahnemann in the conclusion of the *Organon.*

Great is the power of mind over matter! Great the power of the mind over the body! These sayings have become axiomatic; even the materialist accepts them, with his own glosses.

For ages "regular" medicine embraced and practiced upon the *dominance of the soul* in life. The materialism of the moderns has declared against it and such practice has been relegated to the realm of charlatanry. Mesmerism, of which Hahnemann* was an exponent, was, of course, long ago tabooed as simply an *ism.*

But time has already avenged the soul for the contempt of a generation, and *psychic cure,* in some form, is in everybody's mouth. Mesmerism under other names is not so bitter; and great men, as Charcot and others, are not ashamed of "thought transference," "mind-reading," "hypnotism," and "suggestive therapeutics." A regular text-book, so entitled, is published by the house of Putnam, in New York. In Homœopathy, Dr. H. N. Guernsey declared the soul to be the real seat of disease, and the highest potencies its "nearest of kin."

It would be quite unscientific, to-day, either to ignore or to fail of tracing psychic cure to its highest development. Throughout, the *nature* of *psychic force* is evidently one, from the fascination of

* See, also, Reichenbach, on "The Odic Force."

the serpent or of the voodoo, upward. Its evil and its benevolent acts are alike in kind, different in purpose, plan, and effect; its moral quality according with the will of the actor and of the subject as well; for co operation intensifies and multiplies, whilst antagonism nullifies it, at least in part.

The psychic cure of disease illustrates all this. The patient must be just and benevolent in purpose or his malevolence will antagonize the benevolent will which purposes his cure. He must confide in that will or his unfaith must surely block its access to him.

The simplest form of psychic cure is *self-cure*. One illustration from army experience will suffice. A young medical officer about to mount his horse for a march, found himself with a malarial fever. On being offered medicine he declined, saying: "*No; I believe I can throw it off.*" He rode on; his *faith in himself* mastered the fever, and directly afterwards he was well.

And now, mark! it was by no violent exertion of "will-power." but by *self-faith*, inspiring quiet, calm, and resolute *self control*.

Not many persons, however, are equal to the same. To such, the sympathy of friends may supply the aggregate of curative force needed; or the assertion or "suggestion" of an operator—call him mesmerist, or hypnotizer, or doctor—will accomplish more if the patient agree, or mayhap in spite of him.

"Christian science" or "spiritual science," so called, originated with Mrs. Eddy, of Boston, a few years ago. It proffers to teach each person to rely upon "the divinity within," with a threefold or composite faith—in the teacher, in indwelling divinity, and in *self*, thus empowered.

A lady practitioner, being asked what and how long is "a treatment," replied, in substance, "I sit alone with my patient, in quiet agreement, and assertion of this (three-fold) faith; my mind excluding and *denying* all antagonisms; all subserviency to material forces; to all social, medical, and other tradition or authority; to any and all fetters; denying all faith in the domination of evil of any kind; hence, all ill-will, and all fear. I deny all those, for both of us.

"On the other hand, I continuously maintain and *affirm*, for both of us, our perfect good-will, and our freedom, and purity of purpose toward all beings: our *assurance* of the indwelling divinity; of the universal human enduement, including ourselves; of the unap-

proachable supremacy of spirit; its omnipotence, in the presence of so-called matter, and the physical forces. I further affirm and maintain, for both of us, that *good* is the very essence of divinity *the only absolute;* the original substance of all things.

"And *how long* do I continue in this close mental relation with my patient—now my pupil and my friend—and what is the length of the 'treatment?' Why, whether five minutes, or one hour, *until I see the Truth!*

"If I, only, reach this point, the treatment is efficacious. The patient, however, after a while, resuming her relations with the contrary and noxious—that is the ignorant, falsely polarized thought and tradition in which all her troubles (mental, and *hence* physical) were originally brewed, resumes also the downward trend, in the old order and the treatment must be (usually it is so) repeated, from time to time.

"If, however, she, too, sees the truth with me, and maintains it against all hindrance, she needs me no more, so long as no taint falls into her being. She is now herself a teacher and a healer."

And this lady had real success in healing. Hygienically, at least, such high optimism must be credited with great powers. Once more, and higher "Divine healing," as expounded by its excellent and exemplary teachers, takes the standpoint of orthodox theology, the promises of Jesus, and the practice of the apostles; and particularly, the command of St. James (Epistle, chapter fifth, verses thirteenth to fifteenth); anointing with (olive) oil, and the prayer of faith. And many have thus recovered.

One of the earliest exponents of "Divine healing" in America was the greatly beloved and loving Dr. Charles Cullis, recently deceased; one of our own school; one of the Christian philanthropists of the age, and a citizen of Boston, Massachusetts.

Hahnemann, in his own way, received also a gift, all divine. The world will ever need it. Let us be forever thankful for this, and for all other divine gifts; and let our faithful cultivation of Homœopathy prove to all men that we are of the Truth, and that the Truth hath made us free.

THE HOMŒOPATHIC TREATMENT OF TABES AND PSEUDO-TABES.

By Alexander Villers, M.D., Dresden, Saxony, Germany.

All over the civilized world nervous diseases are on the increase —a condition at once explicable by and sequential upon the vast demands upon the central, the vital force. In the changing battle for life, in the hurry and irregularity of the daily routine, in the growing necessity for varying types of distraction, it is inevitable that nervous exhaustion must more and more obtain. Transmission of disease from generation to generation, the mild form begetting the severe, tends also toward the emphasis and establishment of these conditions, until in this deteriorated soil the rank growth, syphilis, strikes firm root, and upon the central nerve trunk are grafted the various forms of disease. Such an effect from such a cause is tabes, and if Homœopathy will render an account to itself and to us of its accomplishment in this trouble, we shall find a touchstone of comparison between our own work in this behalf and that of our colleagues of the alien persuasion. In a historical *résumé* of this subject, the testimony of our older literature is only valuable theoretically.

It is not available as statistic and comparative material, for its erudition and deduction have waned in the fuller light of a later day, a day whose classification of other as well as nervous derangements is more promisingly rational, definitive, pathological, and anatomical. It may be here opposed that classification of any day or description can have no Homœopathic weight because Homœopathy challenges treatment which bases on disease names; but to such opposition I cite Hahnemann's reply to Dr. Jahr, where he expressly asserts that independent diseases may exist "by which the robust may be attacked without internal cause, as in la grippe, whooping-cough, scarlet fever, erysipelas, inflammatory pleurisy, and other in-

dividual diseases where names represent disease and not symptoms of disease, as is the usual case."

And among these independent types one may, in absolute accuracy, rate tabes, so positive and individual is its character. I need not here enter into detailed enumeration of tabes' varying forms; suffice it that I deal with the more intrinsic features of the pathology of the disease. Our modern designation of tabes is not complicated with the archaisms of earlier medical literature, which confuses with its multifold distinction and explanation. However, from the early chaos of diseases of the spinal marrow, Horn, in 1827, Romberg, in 1851, and Duchenne, in 1858, had already crystallized a oneness of existence for that acute, destructive form which we to-day know as tabes dorsalis, progressive locomotor ataxia. Its patho-anatomical character is indicated in the atrophy of the posterior ligaments and of the posterior nerve roots, especially noticeable in the hip segment of the spinal marrow. The uniformity of the pathological showing testifies to the limitation of the range of symptomatology. There are, to be sure, other affections of the spinal marrow which manifest certain of the symptoms of tabes, *vide*, disseminating sclerosis, in which the sclerotic changes are apparent in the posterior ligaments; but it is in specific tabes, and only in tabes, that all the essential symptoms, and only the essential symptoms, appear.

Concerning the ætiology of tabes, I stand committed free and entire on the side of those who, following the precedent of Fournier and Erb, account syphilis the most important ætiological period. All other ætiological periods which may be cited are, in my opinion, subordinate.

Neither mental nor sexual excesses, nor the oft-responsible colds, can ever engender tabes in themselves. However, it is interesting to mark the influence of a cold upon the incipience and course of some special symptoms, and encouraging to be able to fasten at once upon one effective remedy in the treatment. I refer to *Rhus tox*— an indispensable factor in the management of tabes. In the atrophy of the posterior ligaments *Secale corn.* is one of our most opportune remedies.

Although tabes is more frequent with men than with women, its course in the two sexes is not marked by any difference, and in either it is named incurable. Improvement is possible; skillful treatment may control and abort many an outward manifestation, but the de-

veloped disease itself is only manageable—ineradicable; and this for the reason that we have only cure agents—not creative agents—within our range of medicine. We cannot make new tissue out of nothing. We cannot recreate tissue; we can only mitigate the processes which, without our aid, tend to utter destruction. We are, of necessity, effective against disease processes, not products. These last mark the *ne plus ultra* of our abilities.

When the symptoms of tabes begin to marshal in double rank it behooves us to distinguish clearly between them, because the one array indicates the change in the spinal marrow which precedes atrophy, the other the developed atrophic condition of the marrow. The first condition is manageable, the latter is hopeless. To the first class belong the skin eruptions, the feeling of fatigue and of muscular stiffness. To the other class belong the various forms of ataxia, muscular lameness of eyes, limbs, intestines and bladder. The deterioration of sexual power belongs to the first class, the utter loss thereof to the second class.

To deduce now for practice: we can cure incipient tabes, we can allay the irritative symptoms of the developed forms, we cannot materially modify the accomplished results of the developed forms. Even with this admission, however, we are in better plight than our confréres of the Old School, for they cannot check the progress of the incipient symptoms.

Symptoms greatly resembling those of tabes belong to many forms of hysteria. Multiphased as this latter disease is, it is not surprising that it should also cloak itself in some of the guises of tabes. The genus of the misleading symptoms becomes apparent under careful consideration of the duration of the individual play of the disease. One exquisite case of hysteria with pseudo-tabic symptoms, which had deceived several experienced specialists, came under my observation in a person 43 years of age. Basing wholly on the symptomalogical indications, I chose a remedy which bettered one class of symptoms. Then I set to work to beguile the spiritless patient into a belief that her trouble was hysteria, and not tabes. In a short time my course was justified by the passing of the psychical condition of despair and inertia, leaving me firm in my conviction of the mild and hysterical incipiency of the case.

Since in the treatment of disease we are Homœopathically concerned with our knowledge of the immutable workings of drugs,

basing not at all upon the shifting values of symptoms, it is immaterial, in the treatment of tabic symptoms, whether these are intrinsically of the disease, or whether, suggesting other nerve disorders, of the same class of indication. Such being the case, it is not worth while for me to longer discriminate between symptoms tabic and pseudo-tabic.

Jendrassik has recently asserted that tabes is not an affection of the spinal marrow, but primarily of the gray matter of the brain, from which source the destruction-processes fasten upon the posterior ligaments. This theory, which rests exclusively upon the frequent appearance of cerebral symptoms in the incipient stage and course of tabes, has little of probability in itself, but serves, rather, to show what a fruitless labor it is to found a treatment of this disease upon the accepted knowledge of its source, and to indicate the superiority of our Homœopathic position, since we act upon our frank admission that we can only recognize certain external symptoms in the aggregate of cases, and can but approximate the origin of the disease so long as the origin of life is a sealed chapter to us. It is a simple truth, and one universally intelligible, that we cannot place and classify abnormalities—departures from the rule—so long as we are limited in our knowledge of the normal, so long as we cannot resolve the rule; and where is the man bold enough to assert that he hath read aright the riddle of life?

The course of the disease divides itself, during the long years of its duration, into three periods; the first, or stage of invasion; the second, or stage of development; and the third, or stage of complication. The length of the single periods varies, while the entire time consumed in the course of the disease ranges from six to twenty years. The stage of innovation is always the longest and presents the more promising possibilities of recovery. It is that tide in the affairs of men which can be taken at the stem, and a great percentage of cases then treated will permit of a check in the disease's course and of a prolonging of the life at stake, and of a maximum decrease of suffering, which, for all practical purposes, may count for recovery. In the second stage, that of completed development, all the symptoms which figure in the pathological schema of tabes stand out pronouncedly and the treatment becomes more difficult. In the third and final stage, the stage of complication, the devastations of the spinal marrow begin to result upon the various organs,

and from that point on the question is no longer of recovery, but of mitigation of suffering. The devastating changes which the picture of the disease now localizes in the central organs are radical and unsusceptible of substantial betterment. The destroyed or vitiated nerve-cells cannot be recreated; in such case we have run again upon the bleak wall of our limitation. Disease-processes, let me repeat, are curable; disease-products are only modifiable when engaging nerves of reflex capability.

In the first and third stages of tabes the treatment must in all cases be purely Homœopathic, that is, based wholly upon the complexus of symptoms which the individual case presents. In the second stage, the symptoms are so characteristic, that any individuality of case coloring recedes, and we, like our Allopathic colleagues, can refer directly, and in all cases, to the name of the remedy pathologically indicated.

Neither opportunity nor time just now presents for a review of the whole detail of tabes, but it seems fitting that I should here enter somewhat into the treatment of the premonitory conditions, because those are the conditions, and then the time, where treatment is most effective.

Year in and year out, long before the patient experiences any actual hindrance or any noticeable pain, he complains of "that tired feeling," often the only urge which precipitates him upon a timely treatment. This premonitory feeling of fatigue is peculiar to all chronic diseases of the spinal marrow, and is as essential an element in the constituency of that at-present reigning disease, neurasthenia. In the valuation of this symptom we must carefully discriminate between two offering possibilities: the one a condition of neurasthenic weakness, the other pointing to a more onerous complication of the nervous system, tabes. From the one-view point will be whetted a critical judgment of ourselves and our trade, from the other we will be led to clap spurs to speedy care. In the many remedies indicated in fatigue, the most essential in import are *Arnica*, *Antimony tart.*, *Causticum*, *Cannabis*, *Nux vomica*, *Rhus* and *Tabacum*, while *Pulsatilla*, which counts the feeling of fatigue among its indications, is not at all effective in the forerunning conditions, for the reason that they lack that eminent characteristic of *Pulsatilla*, deterioration in repose.

Not so significant as the fatigue, but of equally early appearance

and steady duration, is the admitted weakness of the bladder and the sexual organs. Where excess is directly determined upon, and where symptoms of neurasthenia, or of some special affection of the centre of the uro-genital nerves are not peculiarly indicated, the apparent symptoms must immediately direct attention to the possibility of tabes in the prodromal stage. In the premonitory bladder vitiation I have got best service from *Clematis* and *Sulphur*, and in sexual impotency, *Caladium*, *Causticum*, *Graphites* and *Sulphur*, are my preferences.

The prevalent impression that tabes is the result of sexual debauchery, and the moral reproach consequently attaching to the unfortunate patient, is undeserved. When in the ætiological forecast of a case of tabes the responsibility rests with sexual excess, complications early ensue, as is true in multiple sclerosis, which may pass in its incipiency for almost every other form of spinal affection, and other immediate and indubitable symptoms index the origin of the trouble.

During the stage of invasion, every possible remedial agent must be cautiously and advisedly employed. Tonic effects upon the body are to be secured through massage and waters, the unloading of the system through special diet and the sparing of the nerve system through change in the habits of life are to be prescribed, and the prescriber must vehemently insist upon a rigid adherence to his side orders as upon the use of his remedies. Baths in thermal springs are helpful in the first stage. We of Europe may have recourse to Gastein, and, further up the line, to Wildbad, Baden, Weiler, and the thermal springs of France. But, on the one hand, the chosen springs must be Homœopathically adapted to the individual case, and the required provings of the waters are with difficulty and rarely obtained—one of our best, the proving of the Gastein waters, got up by Dr. Proll, I have made public in the first volume of my Annals (*International Homœopathic Annals*, Dr. Villers, vol. i., p. 17, English Edition), while, on the other hand, the right bath being carefully selected, the waters must be cautiously employed, lest the very Homœopathicity of the application lead to a deterioration whose course cannot be checked.

In the stage of perfected development there stands at the apex of all bewailed symptoms the lancinating pains through the trunk and in the lower limbs. However the image of the pain may vary as

to its burning or boring or sticking character, there always obtains an impression of its sudden, interpenetrating nature. According to provings, the remedies most widely effective for this state of affairs are *Belladonna*, *Lycopodium*, *Sulphur*, *Colchicum*, *Graphites*, and *Stannum*. These especial pains frequently manifest a further individuality in the fact that severe pressure upon the seat of pain gives substantial relief, while light pressure violently augments the trouble. This limits the above-cited number of remedies to those whose pathogenesy presents this idiom; these are *Graphites*, *Sulphur*, and *Stannum*. In accord with this consideration, I have obtained the best results with *Graphites* in most cases, using *Stannum* only when the appearance of pain was marked by a steady increase, a not infrequent manifestation in tabes.

Sooner or later to these lancinating pains is allied parasthesia, the most frequent symptom being the feeling of formication in the lower limbs; then the feeling of being laced across the throat and in the joints, and the sensation of abnormal temperature in particular parts. The formication, in its slightly varying forms, is almost always greatly amenable to *Secale*. In a few cases only *Nux vomica* serves a better turn. This last agent is indicated in the early appearance of sluggishness in the colon, and we at once recall the application of *Nux vomica* in the frequent cases of titillation of the soles of the feet after the overloading of the stomach, or especially in that stowing in the abdomen which we often see in our daily practice.

The feeling of lacing in both trunk and joints belong to the province of *Graphites*, *Nux vomica*, and *Stannum;* and three other remedies may be hereto appended as worthy of note, as their application is not to be overlooked in the therapeutics of tabes. I refer to *Rhus* and *Alumina*, and, in the acute contraction of the abdomen in the spasms of pain, to *Plumbum*.

The feeling of circumscribed warmth or cold when appearing separately I have never yet been able to subdue without the aid of outside agents like rubbings, massage, fomentations, etc. Moreover, the fact that these symptoms, as well as those of other parasthesiac showing, appeared in the section of the under arms, has given me no clue capable of development, although I marked improvement in one case with *Ruta*. In this stage the reflex muscles are either destroyed or materially vitiated. Although this indication, which most clearly presents in the so-called Westphalian phenomena and

also in the destruction of the reflex patella muscles, blurs somewhat between the above alternatives, yet the appearance of the symptoms is indubitable proof of the existence of genuine tabes, and appeals to our most searching attention in our diagnosis. A coexisting—and in many patients even earlier appearing—symptom is the irritation in the region of the sexual centres. Strange to say, women present more striking indications herein than men, for the disease course in the male develops no characteristic similar to the clitoris crises of the female, of which Charcot, Bouchard, and Pierret make mention. These excitative symptoms in the sexual organism, with the pains of the clitoris and along the nerves directly dependent upon the uterine plexus, manifest in hysterical patients given to masturbation, and more particularly in women whose husbands discontinue the marital relationship to avoid the begetting of children. It becomes, therefore, of prime importance to raise this question with the patient, for if the irritating cause of trouble is unknown it is useless to think of improvement or of healing. But whatever the cause, *Nux vomica*, *Selenium*, *Camphora*, *Stannum*, and *Cantharis* are not without good results.

It was left to Duchenne's imperishable service to prove that, despite the ataxia of the tabes patient, the muscular power does not suffer detriment. The ataxia is indeed but the result of the decrement of the inner muscle matter. The question has been mooted in discussion to be true, but Leyden's theoretical and Charcot's and Pierret's anatomical researches have left small doubt on this score in my opinion. The possibility of proceeding further in our symptomatology here again fails us because our provings do not cover these finer differences. It is an urgent duty of our generation to perfect the provings of drugs with regard to the chemistry of secretions, and to the modern aids to research in the nerve province.

In consideration of the circumstance that any infallible knowledge of the right remedy is lacking, and that the actuating cause of disturbance is the completed degeneration of the central nerve system, we are precipitated upon the practical conclusion that in this stage of tabes we can here and there obtain fortuitous results, but not as yet cures, by our present methods and knowledge. In this connection it is well to glance at the results accruing in this behalf to our colleagues of traditional medicine. They, too, find their po-

sition one of helpless incompetency, for the insensibility of narcotics, their *cul-de-sac* of refuge, is never to be accounted recovery nor improvement. Of their recommended methods of treatment, whose number but the more increases as their efficacy is disproved, only three need attract our attention: suspension, the application of electricity, and baths.

The theory of suspension, which was so enthusiastically preached by Motschutkowsky, and given a friendly God-speed by Charcot, has already outlived its practice. After those careful showings of Eulenberg and Mandel no one will quite dare to again recommend it. The application of electricity still flourishes, although its most eager supporters adduce no convincing results in its vindication. In former days I, too, rather lent myself to the belief that the application of a constant current was advantageous in treatment, since its beneficent result is undeniable in certain pain sensations. But practice, that great and final schoolmistress of us all, has taught me that the application of the intermittent current during and after Homœopathic treatment jeopardizes and even annuls our results. Moreover, the cautious intermittent current is an agent whose positive effect is incompatible with, and consequently destructive to, the healing of our potencies.

There are yet left certain symptoms of tabes to be touched upon of not so inevitable appearance as those already discussed. I mean the retardation of the functions of the bladder and intestines, the gastric crises and the atrophic changes.

While I am justified in speaking decisively of my victories in subduing the intestinal trouble by lightening the work of the rectum through warm-water injections according to Hegar's method, yet I have been unable to universally cope with the equally important disorders manifesting in the functions of the bladder, in spite of many happy results in the use of *Arsenicum*. In order to avert the dangers imminent upon a retention of the urine, I empty the bladder three times daily, and if I cannot myself attend to the same with the catheter, I have it done by manual compression.

The gastric crises, which are so closely allied to the lancinating pains, I have never been able to overcome, and the atrophic changes, with which, however, I have seldom met, I consider unamenable to treatment.

The choice of remedy must be unconditionally Homœopathic, and

I furthermore believe that in the treatment of tabes the best results will accrue to that Homœopathic physician who adds to a scholarly knowledge of symptomatology the fundamental features of the antipsoric method of cure. For this reason I have contended from the beginning for the use of the highest possible potency of the chosen remedy, and I have come off very well in the attempt. These higher potencies—the 200x suffices for my need—I give at long intervals, and in order to quell the sufferer's impatience between doses, I give him mock powders.

In a critical review of the results obtained one should not forget that remissions often endure for a month and deceptively simulate improvement or recovery. It is, for this reason, advisable to impress the patient from the beginning with the need of long-continued treatment, and to picture to him emphatically the difficulty with which any favorable modifications of his trouble are attained.

From practical experience I have deduced the opinion that Homœopathy may undertake the treatment of tabes with the certainty of securing recovery to the patient in the first stage, and remissions of long duration in the developed process—the which is more aptly and accurately of Homœopathic capability than of that of any other system of cure.

REPORT

OF THE

SECTION IN MENTAL AND NERVOUS DISEASES.

CHICAGO, Friday, June 2, 1893.

THE Section in Mental and Nervous Diseases of the World's Congress of Homœopathic Physicians and Surgeons met in "Hall 29" of the Art Building and was called to order at 3 o'clock P.M., by Selden H. Talcott, M.D., of Middletown, N. Y., Chairman of the Section.

Chairman Talcott opened the meeting by delivering his Sectional Address, his subject being "A Review of Recent Work and Progress in the Field of Psychology."

"Clinical Instruction to Medical Students in State Hospitals for the Insane," by N. Emmons Paine, M.D., of West Newton, Mass., was the title of a paper read by its author. The paper was supplemented by certain resolutions, which were unanimously adopted. (See the resolutions at the close of the paper).

"The Octave (Septenary) in Nature and in Man as the Key to Pyschology," was read by its author, J. D. Buck, M.D., of Cincinnati, O.

These papers were discussed by Drs. H. B. Fellows, of Chicago, Ill., Davis, of Michigan, and E. R. McIntyre, of Topeka, Kan.

"Puerperal Insanity," a paper by A. P. Williamson, M.D., of Minneapolis, Minn , was presented. In the absence of the author it was read by the Chairman of the Section, Dr. Talcott.

The next paper submitted was on "The Causes of an Increase in Melancholia," by William Morris Butler, M.D., of Brooklyn, N. Y. In the absence of Dr. Butler it was read by Chairman Talcott.

"Some Statistical Facts Concerning Insanity," an essay by George

Allen, M.D., of Middletown, N. Y., was presented by the Chairman with a careful review of the subject of the paper.

Dr. H. R. Arndt was called for, a paper having been expected from him. It was announced that his paper would be forwarded to the Secretary of the Section.

An interesting discussion followed upon the subjects treated of by the last series of papers. This discussion was participated in by Drs. Talcott, H. P. Skiles, of Chicago, Ill., and E. R. McIntyre, of Topeka, Kan.

A paper on "The Bichloride of Gold Treatment" was offered by M. O. Terry, M.D., of Utica, N. Y.

The Section then, on motion, adjourned.

[NOTE.—The reports of the discussions of the meeting, also the papers by Drs. Arndt and Terry, have not been received by the Publication Committee of the Institute.—P. D.]

SECTIONAL ADDRESS IN MENTAL AND NERVOUS DISEASES.

A Review of Recent Work and Progress in the Field of Psychology.

By Selden H. Talcott, M.D., Middletown, N. Y., Chairman.

Fellow-Members.—As Chairman of the Section of Mental and Nervous Diseases, it becomes my duty to present an address before this Society, giving a review of the work accomplished during the past twelve months, together with the general trend of interest and progress in the field of psychology.

The work accomplished by this bureau may be summarized by presenting the following list of articles relating to mental and nervous diseases, together with the names of their authors:

"Progress in the Care of the Insane and the Development of the Hospital Idea in the Treatment of Mental Invalids," Dr. Selden H. Talcott, Chairman, Middletown, N. Y.

"Puerperal Insanity," Dr. A. P. Williamson, Minneapolis, Minn.

"Statistical Facts Relative to Insanity and its Treatment," Dr. George Allen, Middletown, N. Y.

"The Care of the Insane," Dr. C. Spencer Kinney, Middletown, N. Y.

"Clinical Instruction to Medical Students in State Hospitals for the Insane," Dr. N. Emmons Paine, West Newton, Mass.

"The Causes of an Increase in Melancholia," Dr. William M. Butler, Brooklyn, N. Y.

"The Octave in Nature and in Man as a Key to Psychology," Dr. J. D. Buck, Cincinnati, O.

"Mental Depressions and the Influence of the California Climate Thereon," Dr. H. R. Arndt, San Diego, Cal.

In considering these papers we conclude that during the past three years there has been a marked tendency to an increase in that form

of insanity known as melancholia, and due, we believe, to the effects of la grippe when complicated with Allopathic treatment.

We also find that operative surgery is having an influence upon the mental condition of woman which should receive close scrutiny and careful investigation.

Again, we note that the influence of climate and of diet and of social surroundings are most marked either in the production or prevention of that most dreaded of all diseases—insanity.

The various phases of mental disorder, together with their causes, and the conditions under which they most flourish or decline, have been discussed by the writers already named. Hence, we shall devote the brief space of time allotted to us for a bureau address to a consideration of the general progress which has been made toward an understanding of the nature of insanity, and likewise shall seek to consider the most modern method of treating this malady, and attach to this dissertation a few tabulated statements showing the results attained.

It may be interesting to some of you to know that the history of the care and treatment of the insane may be divided into four great epochs:

1. The epoch of absolute neglect, when these sick people were outcasts from society and compelled to live in forests and in caves. This was their condition when the Great Physician of Galilee began His work of healing the nations.

2. The epoch of the dungeon, the chain, the strong cord and the whip. This was the epoch when the insane were treated as the worst of criminals, and that treatment still constitutes one of the horrors of the Dark Ages.

3. The epoch of the asylum, where the insane were held "in custody," and made to feel constantly a sense of imprisonment; but their confinement was carried on in substantial and imposing buildings, and the insane were kept in comfortable rooms, and given sufficient food, and clad in warm raiment, and, generally, they were afforded such comforts as seemed necessary in the dim light of a dawning perception of the needs of this strange class of human beings.

4. The epoch of the hospital. In this latter epoch the fact that the insane are sick people suffering with brain disease, and needing medical as well as physical care, was fully disclosed by the discov-

ery of modern science. This epoch is very recent in its origin. Although Pinel struck many shackles from the limbs of the insane one hundred years ago, and although at that time Samuel Hahnemann taught the doctrine of kindness to the insane, it was but recently that insanity was considered so much of a physical disease as to require hospital treatment in every sense of the word.

I think it may be truthfully stated that during the past twenty years greater progress has been made in the acquirement of a correct knowledge of brain and mind diseases, and in treating them successfully upon the hospital plan, than ever before.

It took nearly eighteen hundred years of a Christian era to so far develop the human understanding as to inspire Pinel with sufficient confidence in the law of kindness to strike shackles from the limbs of maniacs. It has taken, since his day, a hundred years of persistent teaching to change the dungeon into the asylum and the asylum into the hospital. The "Hospital Idea" may be said to have been practically recognized only during the past few years. Even now its recognition is but partial, but its beneficence must, we think, speedily be acknowledged by the charitable and sympathetic masses of philanthropists.

The cave treatment that belonged to the Healer of Gennesareth, and the dungeon treatment which forms a part of the horrors of the Dark Ages, have passed away, and we have now to consider only asylum care and hospital treatment for the insane.

Let us consider now the difference between an asylum and a hospital. An asylum is a place of custody where the insane, dangerous to themselves or others, may be confined for the safety of the community as well as that of the individual. A hospital is a place for the treatment of the insane, and where cures are effected if possible. The asylum is associated with strong walls and barred windows and heavy doors and generally prison-like and custodial attachments. The asylum, in its old-time purpose, is constructed upon the "safe bind, safe find" principle. The lunatic has often been, and still is in some quarters, looked upon as a being who is almost, if not quite, as dangerous to humanity as the most hardened and reckless criminal. Hence, close custody has been the allotment awarded to him by judicial proceedings or, at least, judicial approval.

The "Hospital Idea" recognizes the broad and conclusive fact that the insane man is suffering with an actual physical disease.

The lunatic is now looked upon as a person suffering with some pathological state of the cerebral mass—pathological either by organic change of the brain tissues, or by functional disturbances within the cranium, or by reflex irritation of the cerebrum through the influence of disease located in some other organ of the body.

The fact that the brain of the insane man is diseased having been recognized, it would seem, then, the most natural and logical conclusion to arrive at that he should be favored with as skillful, and scientific, and thorough hospital care as a person afflicted with any other form of disease in any part of the body; and yet, when we come to advocate and recommend hospital treatment for the insane, we are forced likewise to consider the necessity for depriving the individual of his personal liberty.

In the minds of many, this personal liberty of the individual is sacred, and should not be infringed upon except by the most solemn sanction of the law. While we do not hesitate to consign small-pox cases to the pest-house, and typhus and cholera cases to the hospital for infectious diseases without a judicial commitment in each individual case, we recoil from the idea of placing an insane patient in a hospital against his will, unless a commitment is made out in the most elaborate form by two qualified examiners in lunacy, and their certificate must receive judicial approval by a judge of a court of record before the commitment of the sick man can safely be commenced.

In the State of New York, a legal commitment of an insane man to a hospital for treatment provides for the following:

(1) Medical examination by two duly qualified physicians, and a certification of the result.

(2) Judicial approval of the certificate by a judge of a court of record.

(3) Approval or disapproval of these judicially approved papers by the State Commission in Lunacy.

Here is a formidable array of legal measures to be complied with before the lunatic can receive continued treatment in a hospital. Here is an instance where the medical care of the sick is wrenched from the hands of physicians, and the necessity for curative measures may be either approved or denied by a non-medical judge, or a commission that is non-medical by a two-thirds majority.

Why should legal proceedings interfere with the prompt and care-

ful application of medical measures in behalf of the sick? I suppose that one reason to be assigned is this: Insanity is not a contagious disease; if it were then legal interference would be considered unnecessary. Neither a trial by jury, nor a judicial approval, is required when the disposal of a small-pox case is in question. If it were, how many unvaccinated juries or judges would be willing to try the case? No one seems anxious to impanel a jury to diagnose a case of cholera or typhus fever! As Editha's burglar said, regarding *noise:* "It isn't considered 'ealthy in the perfession."

Now these legal measures, which are required before curative treatment for the insane can be applied, are not taken for the purpose of promoting the interests of lunatics, but they are deemed necessary for the purpose of preventing the incarceration of people who are alleged to be sane, rather than insane. The whole drift and tenor, and tendency of legal commitment of the insane, is against the interest of those who are sick and in need of treatment. The whole trend of legal commitment is toward the protection of the sane to the neglect and injury of the insane.

Under the present forms of legal commitment the lunatic is examined, and probed, and tortured, and ignominiously guillotined in soul before the public gaze, and is branded as a "lunatic" all over his dome of thought before he can be allowed to receive treatment in a hospital for the insane.

Is there any place on earth where the physician is allowed to be the sole judge of the necessities of the sick insane? We may answer, in the affirmative, that in the freest of all republican countries, Norway—the "Land of the Midnight Sun"—the highest and noblest yet simplest form of commitment is to be found. There, the family physician is called to examine the patient, and if it is his opinion that the case needs asylum treatment, he makes an informal, unsworn to, and unapproved certificate to that effect, and the patient, armed with this certificate, and without any legal hindrances or restrictions whatever, is admitted to a Norwegian asylum for treatment and cure. Dr. Lindboe, the distinguished psychologist in charge of the State Asylum for the Insane at Gaustad, near Christiana, Norway, told me, personally, that this method was entirely satisfactory, and that no evil results ever followed the practice which obtained in that country in behalf of the insane.*

* In Scandinavia, the physician must study medicine for *ten* years before he can

Commitment of the insane for treatment in a state hospital should be made as easy as possible or necessary for the sick, and it should be, in my judgment, entirely upon medical authority. There is no good reason for supposing that the family physician will send his patient to a hospital for treatment, thus robbing himself of fees, so long as the case can be safely and properly cared for at home. And even though insanity may continue for an indefinite time, we believe that the insane may safely be sent to hospitals for treatment without judicial approval, because these institutions are now examined and watched over by disinterested boards of trustees, commissions in lunacy, and the people at large; and those in immediate charge of these hospitals have every interest to discharge their patients cured or relieved, as soon as possible, in order to make a favorable showing to the community which holds them responsible for their work.

Not only should commitments be made easy, but voluntary admissions should be permitted. It is a recognized and accepted axiom among alienists that early treatment for the insane is the most successful. Many victims of insanity have recognized at the outset their oncoming mental disasters, and have sought by vague personal efforts to avert them. Hence we urge, as a means to the end, that victims of incipient insanity may receive early treatment in accordance with their own wishes; legal enactments whereby the doors of our state hospitals in all the States may be readily opened for those who desire, even voluntarily, to enter them for treatment. If you would cure the largest possible percentage of the insane, thus keeping the community as free from insanity as possible, you must grant the privilege of easy and voluntary admissions to our state institutions to all the victims of mental disorder.

If men and women could be permitted to freely and voluntarily

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be licensed to practice; but he is then permitted to perform his medical duty without interference by the laity or by another learned profession.

In this country we should compel our students to continue their college courses for eight or ten years, and then physicians should be allowed to care for their patients without the specious and unwarranted approval or disapproval of those who may be rich in legal lore but ignorant of the compound intricacies of physical and mental pathology.

The physician should be thoroughly educated, and then he should be free in action, and should have supreme and unhindered authority in the care and disposition of invalids who may be suffering with either physical or mental disease.

avail themselves of hospital treatment in the early stages of their disease, they would come to accept such benefits more readily, they would recover more rapidly, the usefulness of the hospital would be enhanced, and the apparent disgrace now attached to enforced and involuntary treatment would, to a large extent, be removed. State hospitals for the insane should be as free for the admission of patients needing treatment for mental disease as are other hospitals for the admission of those affected with general or special diseases. Such freedom of entry and egress (for the voluntary patient may depart when he pleases) to and from our state hospitals is in accordance with the spirit which pervades the Constitution of the United States, and is in closest harmony with that memorable assertion contained in the Declaration of Independence: "We hold these truths to be self-evident; that all men are created equal (that is, with equal privileges); that they are endowed by their Creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness."

In maintaining integrity of freedom in one's life, in acquiring full exercise of liberty, and in engaging in the pursuit of happiness, nothing can be more important than that priceless privilege of entering a hospital when sick in body or mind without let or hindrance from any source whatever. It is wrong, unjust, unconstitutional to stamp the name of a disease, held in abhorrence and feared as a disgrace through all time, upon the forehead of an individual who, without the stamp, is willing to avail himself of every possible opportunity for treatment and cure. Individual rights and aggregate interests are infringed upon by unnecessary legal commitments. Let us have laws which shall grant the admission of voluntary patients to our state hospitals, and let commitments be restricted simply and solely, as the law originally designed, to those who must be confined against their wills for the proper protection of themselves and the community.

Again, if any of the insane are to be considered as the wards of the State, let all be treated alike and fairly. That is, if the State assumes wardship over the pauper and indigent insane, let the Commonwealth also assume charge and wardship over those who have both life and property to protect.

Insanity is a disease which renders its victim absolutely helpless. Under its visitation he can protect neither his life nor his property.

Legal wardship implies protection of those who are unable to care for themselves, and who have both life and property at stake. This is the case when a guardian is appointed to take charge of the life and property of a minor. We claim that the insane who have both life and property should be doubly the wards of the State, on account of their helplessness, on account of the interests involved, and on account of the fact that the insane with property are always more or less liable to become the easy prey of designing individuals. While we believe that all the insane should enjoy, if they or their friends so elect, the benefits of wardship from the State, we are also willing to admit that principle of freedom of choice which enables an insane man to go to a private asylum for treatment if he or his friends prefer that method of care.

It is claimed by some that the asylums of Europe are in many respects superior to the asylums of the United States. If we can find in the institutions of the East anything better than that which is now established here, we should certainly seek to monopolize it. In France and Belgium and North Germany and Sweden and Scotland we find institutions for the insane where all classes, both poor and rich, can be admitted, and where voluntary patients are received as well as the involuntary.

We should seek to acquire the best from every source, and then bend all our energies to the making of such improvements as shall conduce not only to the comfort of the inmates, but to the exemplification of hospital treatment for the purpose of curing the largest possible percentage of the insane.

During the past few years the asylums in the State of New York have been converted, by legal enactments, into "State Hospitals." More than that, these institutions have been transformed in many particulars. The rooms and wards and parlors have been renovated and decorated and supplied with comfortable and easy furniture. Soft lounges and cushioned reclining-chairs have taken the place of hard wooden benches; bare floors have been relieved by bright and cheerful carpets; the casements and the walls have been garnished with curtains and pictures; the windows have been made larger and more numerous, and thus more light has been let into the dark and gloomy corners of the buildings; the dingy walls have been painted and frescoed and beautified with harmonious tints; large rooms have been fitted up for hospitals where the best and softest of beds

are prepared for the reception of weak and exhausted patients. The grounds of our public institutions have been made beautiful with trees, and shrubs and plants and gaily-colored flowers which, from balsamic leaf and open petal, exhale invigorating and inspiring fragrance for the stimulation and delectation of the sick. Heavy iron guards have been removed, and light wire screens, for simple purposes of protection, have been substituted; trained nurses, with helpful hands and sympathetic hearts, have taken the place of grim-visaged and hard-souled keepers; smiles have ruled out frowns, and the soft folds of snow-white cloth have been substituted as all that is needful in place of the old-time and harsher restraints of leather and wood and iron.

In this general improvement the matter of diet has been carefully studied, and it has been found that a generous and varied, carefully-prepared and daintily-served bill of fare is far better and more fruitful of curative results than the plain, hard, unattractive prison fare of the past. Hot milk is the beneficent substitute for cold potatoes!

The Hospital Idea seeks to monopolize everything that can be inspired or suggested by the spirit of kindness and sympathy, and it seeks to embody in the line of practical utility everything that can be acquired in behalf of the sick by intelligent human thought or action. The Hospital Idea embraces all that is known in sanitary science as applied to the protection of human life; it embraces all that is known of diet as applied to restoration of impaired physical energy, and it embraces the education and training of nurses, whose nightly vigils are to supplement the daily visits of the physician. The Hospital Idea is the loftiest embodiment of that mighty and far-reaching rule: "Do unto others as ye would that they should do unto you." The Hospital Idea is a topic as vast as ocean depths, as magnificent as mountain peaks, as enduring as are the experiences of sin and sorrow among men. Its application is the last and grandest work of the philanthropist, and a sure forerunner of the millennial dawn. God hasten the day when this Hospital Idea shall be exemplified in the care of every victim of mental disease within the borders of all the nations of the earth.

The cry of the ages is for universal, not limited or restricted, liberty; the cry of humanity's heart is for universal brotherhood; the cry of those who sit in darkness is: "Let in the light of universal truth;" the cry of man's soul is for universal knowledge and

everlasting life; and the cry of the suffering sick, while life lasts on earth, is that the spirit of sympathy and the hand of charity may encompass and help universally, and without limitation of class, all those who have been bereft of the use of their reason, and who need the generous protection and the ample wardship of the State.

We now present a few tables showing the results attained in the State Hospital at Middletown, where the patients are afforded not only the physical comforts of life—the bright and beautiful surroundings of architectural buildings, sanitary resources and artistic grounds, and where trained nurses minister constantly to the necessities of the sick—but also where strict Homœopathic treatment constantly and uniformly prevails. In presenting these statistics we make a modest contrast of our work with the work of institutions where Homœopathic treatment does not, as yet, prevail.

Table I.

This table shows the number of patients discharged, *recovered*, from the various State hospitals of the State of New York during the year ending September 30, 1892, and comparative percentage of recoveries.

Middletown (Homœopathic),	125
Buffalo (Old School),	103
Utica, "	87
Hudson River (Old School),	85
St. Lawrence, "	77
Willard, "	31
Binghamton, "	26
Rochester, "	22
Total number treated at Middletown State Homœopathic Hospital,	1104
Recovered,	125
Total number treated at all other State hospitals,	8340
Recovered,	436

Number of recoveries per thousand under treatment:

At Middletown,	113
At all other hospitals,	52

Comparative Table II.

This table shows comparative percentage of recoveries after four methods: 1. Percentage on whole number treated; 2. Percentage on daily average; 3. Percentage on number admitted; and 4. Percentage on the number discharged for the year ending September 30, 1892.

State Hospitals,	Whole No. treat'd.	No. recovered.	Percentage.	Daily average.	No. recovered.	Percentage.	No. admitted.	No. recovered.	Percentage.	No. discharged.	No. recovered.	Percentage.
Utica	1123	87	7.74	811	87	10.72	345	87	25.21	286	87	30.41
Hudson River	1150	85	7.39	848	85	10.02	297	85	28.61	289	85	29.41
Middletown, Homœopathic	1104	125	11.32	827	125	15.11	338	125	34.02	250	125	50.00
Buffalo	935	108	11.55	614	108	17.58	350	108	30.85	310	108	34.83
Willard	2510	31	1.23	2062	31	1.50	440	31	7.04	395	31	7.85
Binghamton	1364	26	1.89	1143	26	2.27	207	26	12.56	168	26	15.47
St. Lawrence	759	77	10.14	486	77	15.84	372	77	20.69	164	77	46.95
Rochester	499	22	4.40	382	22	5.75	124	22	17.74	89	22	24.72
All Old School Hospitals	8340	436	5.22	6346	436	6.85	2135	436	20.42	1701	436	25.04
All Old-School Hospitals, except Willard and Binghamton	4466	379	8.48	3141	379	12.06	1488	379	25.47	1138	379	34.19
Middletown State Homœo. Hospital.	1104	125	11.32	827	125	15.11	338	125	36.98	250	125	50.00

Table III.

Table III. shows death-rates on the same methods, for the year ending September 30, 1893.

State Hospitals.	Whole No. treated.	No. of deaths.	Percentage.	Daily average.	No. of deaths.	Percentage.	No. of admissions.	No. of deaths.	Percentage.	No. discharged.	No. of deaths.	Percentage.
Utica	1123	80	7.12	811	80	9.86	345	80	23.18	286	80	27.97
Hudson River	1150	113	9.82	848	113	13.32	297	113	38.04	289	113	39.10
Middletown, Homœopathic	1104	67	6.06	827	67	8.10	338	67	19.82	250	67	26.80
Buffalo	935	57	6.09	614	57	9.26	350	57	16.28	310	57	18.38
Willard	2510	191	7.60	2062	191	9.26	440	191	43.40	395	191	48.35
Binghamton	1364	87	6.37	1143	87	7.61	207	87	41.02	168	87	51.78
St. Lawrence	759	42	5.53	486	42	8.62	372	42	11.29	164	42	25.60
Rochester	499	35	7.01	382	35	9.16	124	35	28.22	89	35	39.33
All Old-School Hospitals	8340	605	7.25	6346	605	9.53	2135	605	28.33	1701	605	35.56
All Old-School Hospitals, except Willard and Binghamton	4466	327	7.32	3141	327	10.41	1488	327	21.97	1138	327	28.73
Middletown Homœ.	1104	67	6.06	827	67	8.10	339	67	16.81	250	67	26.80

Table IV.

This table shows the average percentages upon the four methods of computation united, one section showing united average percentages for all Old-School hospitals, another section showing the same for Old-School hospitals except Binghamton and Willard State Hospitals, in which are many chronic cases; and a third section showing united average percentages at the Middletown State Homœopathic Hospital.

Recoveries.	Percentage on whole No. treated.	Percentage on daily av'age population.	Percentage on admissions.	Percentage on discharges.	Total.	Total on 4 preceding methods averaged.
Utica State Hospital	7.74	10.72	25.21	30.41	74.08	18.52
Hudson River "	7.39	10.02	28.61	29.41	75.43	18.85
Buffalo "	11.55	17.58	30.85	34.83	94.81	23.70
Willard "	1.23	1.50	7.04	7.85	17.62	4.42
Binghamton "	1.89	2.27	12.56	15.47	32.19	8.04
St. Lawrence "	10.14	15.84	20.69	46.95	93.62	23.40
Rochester "	4.40	5.75	17.74	24.72	52.61	13.15
Total for Old-School Hospit'ls	44.34	63.68	142.70	189.64	.....	.....
Average for same,	6.33	9.09	20.38	27.09	62.89	15.72
Total for Old-School Hospitals except Binghamton and Willard	41.22	59.91	123.10	166.32	.....	.....
Average for same	8.24	11.98	24.62	33.26	78.10	19.52
Middletown State Homœopathic Hospital	11.34	15.11	34.02	50.00	110.47	27.61

The general average of recoveries for all Old-School Hospitals, is..... 15.72

The general average of recoveries for all Old-School Hospitals, except Binghamton and Willard, is..... 19.52

The general average of recoveries for the Middletown State Homœopathic Hospital, is..... 27.61

PSYCHIATRY AND THE HOMŒOPATHIC MEDICAL COLLEGES.

By N. Emmons Paine, A.M., M.D., West Newton, Mass.

In 1871 there was no *State* hospital for the insane, in the world, under Homœopathic management. To-day there are five. In that year there was no Homœopathic member of the National Society of Asylum Superintendents; to-day there are six. In that year decided action was taken by that Association, which makes it almost a starting point in the newer methods of instruction in psychiatry. As none of the members of the Institute were then members of the Association, it seems to me desirable that its action and the subsequent changes in teaching should be brought to the attention of the Institute, for our information and for directing our course in the future.

It was in 1871, then, that the Association of Medical Superintendents of American Institutions for the Insane passed the following resolutions:

Resolved, That in view of the frequency of mental disorders among people of all classes, and in recognition of the fact that the first care of nearly all these cases devolves upon physicians engaged in general practice, and this at a period when sound views of the disease and judicious modes of treatment are especially important, it is the unanimous opinion of this Association that in every school confering medical degrees, there should be delivered, by competent professors, a complete course of lectures on insanity and on medical jurisprudence, as connected with disorders of the mind.

Resolved, That these lectures should be delivered before all the students attending these schools, and that no one should be allowed to graduate without as thorough an examination on these subjects as on the other branches taught in the schools.

Resolved, That in connection with these lectures, whenever practicable, there should be clinical instruction, so arranged that, while

giving the student practical illustrations of the different forms of insanity and the effects of treatment, it should in no way be detrimental to the patients.

This action of the Association has recently been quoted and endorsed by the New York State Commission in Lunacy, in a circular to the managers of hospitals, dated December 10, 1892.

In order, therefore, to ascertain as definitely as possible what had been done in the direction of these resolutions, I addressed a circular in January to the dean of each of the 144 medical colleges of the United States and Canada. Fearing that not all would respond, and hoping for additional information from another direction, I also sent a similar circular to each one of the superintendents of state hospitals for the insane and certain other members of the Association, one hundred and seventy in number. Most of the superintendents responded quickly and fully, and this informatiom was added to that from the deans and secretaries of the faculties. Few sent no report, and fifty sent answer that they did not teach in any college. On the other hand, the responses from the colleges were unsatisfactory as to number, and they could have been of little value if taken alone and without the information given by the superintendents. As it is, we shall observe what is done for teaching psychiatry in the United States and Canada in sixty-one colleges. Of the other eighty-three, it seems fair to suppose that most of them do nothing in this particular direction, and, therefore, have nothing to report. (A list of the sixty-one colleges is appended.)

In all of the sixty-one colleges, with one exception for this year only, psychiatry is taught either by alienists or specialists. The apparent growth, in twenty-two years, has been from eight to sixty, for eight is the number reporting definitely that this subject was taught in 1871. The next interesting fact is that thirty-four of the sixty-one colleges have obtained the services of superintendents of hospitals for the insane as teachers, while two have obtained assistant physicians of hospitals; and twenty-four have filled the chairs with specialists, the latter class including many grades of fitness for their duties.

Our next inquiry will be whether students are examined in psychiatry as a requisite for graduation, the second of the resolutions. Of the sixty-one colleges, twenty have no examination in this branch; six are unknown; in five, the students are examined,

but not by the lecturer; and in thirty the lecturer examines in his own specialty. The conclusion is, therefore, that in fifty-seven per cent. of the colleges where psychiatry is taught an examination is required.

The last of the three resolutions refers to clinical teaching. In forty-two of the sixty-one colleges, clinics are held; in fifteen there are none; and from four there was no answer to this question. That shows a majority, or sixty-seven per cent., in favor of illustrating the lectures on insanity by cases of insanity. Further, it seems fair to infer that the remaining thirty-three per cent. would be glad to furnish clinical material if circumstances allowed; and it is interesting to note that not one of the officials, replying for the colleges where clinical teaching has been tried, has referred to it in any way but with satisfaction and commendation.

If any one will look over the map of our country and see the location of our colleges and hospitals for the insane, he will be surprised that no more colleges have already made use of the enormous amount of material at their doors. He would be convinced that a large majority of the colleges could teach psychiatry as readily and as graphically as surgery if they only used their advantages and arranged with the state hospitals and their superintendents for lectures and clinics. How this could be done is well shown at the Middletown State Homœopathic Hospital, whose superintendent, Dr. Selden H. Talcott, is also professor of mental diseases in the New York Homœopathic Medical College. He delivers a course of lectures at the college, and, in addition, on one or two days he invites the whole senior class to spend a day at the hospital, sixty-six miles from New York. There they go through the whole hospital, become acquainted with its construction and the arrangement of the wards, and, under suitable circumstances, have selected cases presented to them. In addition to this general invitation, there may be further visits by sections of the class at other times.

The same method of teaching is practiced at the Boston University School of Medicine. Dr. N. Emmons Paine gives five lectures on the anatomy and physiology of the brain and nervous system, reviewing the work of an early portion of the course, and also gives five lectures on insanity at the college. Further, the students visit Westborough Insane Hospital, thirty-two miles from Boston, in a body, five times during the autumn for the fortnightly clinics, which

alternate with the lectures at the college. The superintendent of the hospital, Dr. George S. Adams, presents a variety of cases to them, as well as a large number. Perhaps, in one day, they will have brought before them ten or twenty cases of mania, and on another occasion as many persons with melancholia; so that, without any special study the students learn to diagnose readily and accurately the various forms of insanity, and, better than all, this ability is acquired in a natural way, and is not forgotten in later years. They hear, also, a large number of commitments read and criticized, and they become skilled in writing them by actual practice, with patients before them as models.

The trip to Westborough seems to be regarded with favor by the students, although not obligatory upon them, for the attendance is quite as full as at the lectures, and members of other classes accept the privilege of joining the seniors in these excursions, when their duties will permit. The only difficulty has been the cost, which must be added to the ordinary expenses of student life, but the railroad assists us by reducing its rate to one dollar for the round trip. A lady friend had given the beginning of a fund, the interest of which is used for defraying these travelling expenses, and which is hoped may become large enough eventually to remove this one and only drawback.

Another fact must not be overlooked, that aside from the ordinary forms of insanity with which they become familiar, the students may have introduced to them some of the rare and curious forms of disease. A hospital, with five hundred or a thousand insane, will probably have examples of myxœdema, cerebral syphilis, epilepsy of the Jacksonian type, locomotor ataxia, chronic alcoholism and multiple sclerosis; so that their clinical advantages are not limited solely to insanity.

Anoter State hospital to furnish an alienist as lecturer in a Homœopathic college is the one at Fergus Falls, Minnesota. Dr. Alonzo P. Williamson, who recently resigned the superintendency, has been lecturing in the College of Homœopathic Medicine and Surgery at Minneapolis, and has furnished some clinical cases at the college, but not at the hospital, as that is too far away.

In Michigan, Dr. Oscar R. Long, superintendent of the Michigan Asylum for Dangerous and Criminal Insane, lectures in the Homœopathic Medical College at Ann Arbor, and he, too, cannot take

his classes to the asylum, as the distance is more than a hundred miles in a straight line from the college.

It may be remembered that sixty-one was the number of the colleges having lectures by specialists, but that one was deducted for this year, and that one was the Hahnemann Medical College of Philadelphia. It was there that Dr. S. H. Talcott lectured from 1881 to 1885, and then was followed by Dr. A. P. Williamson until 1890. No successor seems to have been found to Dr. Williamson.

Upon glancing back for a moment, we are surprised to find that in five States the Homœopathic medical colleges have been receiving lectures from alienists of our own school, every one a superintendent of a State hospital. This fact is well worth noting in passing.

In the Homœopathic Medical College of Missouri at St. Louis, I. D. Toulon, LL.B., M.D., teaches insanity with jurisprudence, but he holds no clinics.

The New York Medical College and Hospital for Women is fortunate in having in its faculty Dr. Joseph T. O'Connor, who includes insanity in his course in nervous diseases, and who furnishes some clinical cases at the college.

In one other college, the Cleveland Medical College, instruction in insanity is given by Dr. John A. Gann, in connection with nervous diseases, but no special clinics are held.

This completes the list of the Homœopathic colleges that replied to my circular; eight are accounted for out of sixteen. What is done in the other eight for the instruction of their students is impossible for me to state.

Just here let me diverge for a moment from our subject. So far, our attention has been given to the education of students. Now let us turn to the instruction of practitioners. More information on the subject of insanity would be most gladly received by the members of our school all over our country; and when we have State hospitals already established, this want can be easily supplied. It can be done in this way: Let him select and present to the Society a larger number of typical cases of the easily recognized forms of insanity, or others that may be odd and interesting. Guide the members through every part of the institution. Give them a dinner; and, last of all, do not let him neglect to invite the wives. Such a course systematically carried out would be a great benefit to the

hospital itself, and of the greatest possible advantage to it; but the most valuable results would really be found in the better information among physicians, and the feeling of confidence in the hospital and its work among their patrons throughout the whole State.

Now let us return, after this digression, to our subject.

The conclusions to be drawn by members of the Institute are these: First, that psychiatry is receiving more attention every year from the medical colleges of this country.

Secondly. That alienists and specialists are being selected as instructors, with a noticeable preference for the superintendents of hospitals.

Thirdly. That an examination in this specialty is required for graduation in a larger number of colleges every year.

Fourthly. That clinics are becoming recognized as a necessary part of the teaching in this branch.

Fifthly. That in order to obtain these advantages, every Homœopathic college should labor for the establishment of a hospital for the insane in the States where they do not now exist, and, when successful, the hospital should be located within a few miles of the college.

Sixth, and finally. The Institute, as our national association, should place itself on record in favor of this advance in medical education by adopting the following resolution:

Resolved, That the American Institute of Homœopathy favors the inclusion of psychiatry in the curriculum of all medical colleges of the United States. It favors an examination in psychiatry as in other specialties, and recommends that clinical teaching should be added to the didactic wherever possible.

Appendix.

The statistics of the foregoing article are based on replies from the following sixty-one medical colleges:

Medical Department Arkansas Industrial University, Little Rock, Ark.

Cooper Medical College, San Francisco, Cal.

University of California, Med. Dept., San Francisco.

University of Denver, Med. Dept., Denver, Colo.

Yale University, Med. Dept., New Haven, Conn.

University of Georgetown, Med. Dept., Washington, D. C.

Rush Medical College, Chicago, Ill.

Medical College of Indiana, Indianapolis, Ind.

Central College of Physicians and Surgeons, Indianapolis.

State University of Iowa, Med. Dept., Iowa City, Iowa.

College of Physicians and Surgeons, Keokuk.

Kansas Medical College, Topeka, Kansas.

New Orleans University, Med. Dept., New Orleans, La.

College of Physicians and Surgeons, Baltimore, Md.

Harvard University Medical School, Boston, Mass.

Boston University School of Medicine, Boston.

University of Michigan, Department of Medicine and Surgery, Ann Arbor, Mich.

University of Michigan Homœopathic Medical College, Ann Arbor.

Detroit College of Medicine, Detroit.

The College of Medicine and Surgery of the University of Minnesota, Minneapolis, Minn.

The College of Homœopathic Medicine and Surgery of the University of Minnesota, Minneapolis.

Minneapolis College of Physicians and Surgeons, Minneapolis.

Kansas City Medical College, Kansas City, Missouri.

Homœopathic Medical College of Missouri, St. Louis.

University Medical College of Kansas City, Kansas City.

Ensworth Medical College, St. Joseph.

Barnes Medical College, St. Louis.

Omaha Medical College, Omaha, Nebraska.

Medical Department Cotner University, Lincoln.

Dartmouth Medical College, Hanover, New Hampshire.

College of Physicians and Surgeons in the City of New York, New York, N. Y.

Bellevue Hospital Medical College, New York.

University of the City of New York, Med. Dept., New York.

New York Homœopathic Medical College and Hospital, New York.

Woman's Medical College of the New York Infirmary, New York.

New York Medical College and Hospital for Women, New York.

Eclectic Medical College of the City of New York, New York.

Albany Medical College, Med. Dept., Union University, Albany.

Syracuse University, College of Medicine, Syracuse.

University of Buffalo, Med. Dept., Buffalo.
Niagara University, Med. Dept., Buffalo.
University of Wooster, Med. Dept., Cleveland, Ohio.
Eclectic Medical Institute, Cincinnati.
Miami Medical College, Cincinnati.
Cleveland Medical College, Cleveland.
University of the State of Oregon, Med. Dept., Portland, Oregon.
Department of Medicine of the University of Pennsylvania, Philadelphia, Penna.
Hahnemann Medical College, Philadelphia.
Western Pennsylvania Medical College, Pittsburgh.
University of Nashville and Vanderbilt University, Med. Depts., Nashville, Tenn.
Nashville Medical College, Med. Dept. of the University of Tennessee, Nashville.
Tennessee Medical College, Knoxville.
Chattanooga Medical College, Med. Dept. of Grant University, Chattanooga.
University of Vermont, Med. Dept., Burlington, Vermont.
Toronto University, Medical Faculty, Toronto, Ontario, Canada.
Faculty of Medicine of Queen University, Kingston.
Kingston Women's Medical College, Kingston.
Western University, Med. Dept., London.
McGill University, Med. Dept., Montreal, Quebec.
Laval University, Med. Depts., Quebec.
Halifax Medical College, Halifax, Nova Scotia.
Manitoba Medical College, Winnipeg, Manitoba.

THE OCTAVE (SEPTENARY) IN NATURE AND IN MAN AS THE KEY TO PSYCHOLOGY.

By J. D. Buck, M.D., Cincinnati, O.

Every school-boy is aware that there is a mysterious power in certain numbers like the seven and the nine, and that in permutations to which such numbers may be subjected the most curious results are continually brought to light. The school-boy, however, is not likely, from such phenomena, to draw the conclusion that pure mathematics and exact geometry underlie every process in nature, and determine also every fact and function of what we call life. It is not the object of the present essay to discover a new or to formulate an old hypothesis, but rather to call attention to certain well-known facts and to show that the logical and inevitable deductions that lie very near the surface of all phenomena whatsoever point out a law of nature hitherto overlooked by the western world but well known to the ancients. The apprehension of this law becomes, in the hands of the intelligent and unbiassed student, a key to psychology.

I shall assume nothing that is not demonstrable either by scientific research in the realm of physics or by logical reasoning in the realm of metaphysics. These are the two realms in which man's being exists, and the two methods by which we derive what we call knowledge. Exact observation and correct reasoning are the agencies in all our investigations. As the base and the capital stand to the perfect column, so stand observation and reason to exact knowledge.

The physicist resolves the universe into matter and force, or mass and motion; the metaphysician into law and order; the physiologist into structure and function; the psychologist into consciousness and intelligence; while the philosopher, through his apprehension of universal order and harmony—diversity in unity and unity in diversity—sees behind a boundless and eternal nature, an intelligence that works by law and determines evolution. Knowledge is

the combined result of all these forces and processes. Nature, in order to be apprehended, must be viewed and studied from every point of observation. Hence the knower must be at once the physicist, the metaphysician, the physiologist, psychologist, and philosopher. All fragmentary or one-sided views are not only incomplete, they are generally misleading.

Nature exists as an eternal unity, without beginning or end in time; creation and duration are aspects of eternity. What we call "beginning" and "end" are but the succeeding changes when endless duration is broken into fragments called time. Every beginning has been preceded by what we call an ending, or the close of a previous cycle. Every so-called end will be followed by a new beginning, or the dawn of a new cycle.

The first postulate in the last analysis attainable thus far by man is the idea of space. The idea of abstract space is not emptiness but a conditioned fulness. It is the boundless and eternal potency, continually evolving into universal actuality, and again receding into its source. This appearance and disappearance is periodical and rhythmical, and time is but the measure of its pace. Evolution is the wave of its ebb and flow; the ceaseless impulse that differentiates the one into the many, the universal into the particular, and, in this differentiation, the individual epitomizes the universal. Every atom, like a mirror, reflects the face of the universe. Space is, therefore, full of substance, and this substance is the root of all matter. Space is full of energy, and this energy is the parent of all force and determines all motion. We have thus a trinity of concepts flowing from out first unity—space—and this trinity is space, substance, and energy. Behind all matter and motion we discern rhythm, order and proportion, or intelligence, and the form of this manifestation, that is, its persistency, recurrence, periodicity, and harmony, we call law. As the whole must necessarily include all of its parts, every essence and phenomenon, manifesting in a part, must be latent in the whole, and this includes life and consciousness.

Starting thus with our concept of boundless and eternal nature, we have universal substance endowed with universal energy, governed by universal law, and manifesting universal life, universal intelligence, and universal consciousness. The terms, "living" and "dead," whether applied to atom or sun, to microbe or to man, are

relative only. Back of all apparent death lies the eternal potency that we call life, that has made it possible to die. Back of all apparent unconsciousness lies the universal consciousness from which individual consciousness springs, into which it returns periodically only to again emerge from the latent to the actual or manifesting. Hence are derived the cycles of time, as the cycles of life; the whirling of suns and the circulation of the blood. It is but the motion, the periodicity, the rhythm and harmony of the universal manifesting in the individual.

Here, then, lies the basis of psychology, psyche-logos: a knowledge of the soul. But where is the key to its knowledge and interpretation?

Let us take two functions in man with which we are quite familiar, sight and hearing. With all the diversity and multiplicity of the phenomena of sight and hearing, we find an underlying harmony. If we were never conscious of but one color and one sound, if monochrome and monotone took the place of the endless diversity in these two realms, we would be unconscious of either sound or color. These functions exist only by virtue of diversity in harmony. To illustrate this, we may imagine ourselves living in a world of absolute light, where no object ever cast a shadow, and from which all gradations of light and darkness had disappeared. The result would be that we could have no knowledge or experience of light at all. Absolute light is thus synonymous with absolute darkness. This concept is the basis of what, in the oldest philosophies, is called the "pairs of opposites." The same reasoning and the same conclusions are applicable to sound, color, taste, and smell, and, finally, to the very basis of mind no less than of sensation. What we call thought is but the changes occurring in our state of consciousness.

To return to our analysis of sight and hearing, we thus see that perception and sensation depend on change and diversity. The basis of all this change is number and harmony. Not only have we primary colors and primary tones, but every color and sound is related to every other in nature by concrete degree, just as every chemical substance has its combining number, and is related to every other substance by a fixed and inherent law of proportion by which it enters into combination. Number also determines form, so that the saying of Plato, that "God geomatrizes" expresses a universal law.

The key-note of all this rhythm and harmony of relation and combination is the septenary, called in music or harmony the "octave." Every octave is simply a series of septenaries, the last tone of one octave being the first of the succeeding scale. Now, if we begin with the lowest tone apprehensible to the human ear and raise the pitch octave after octave until the tone again becomes inaudible to the average ear, science has estimated that about thirty-four octaves would intervene between the vanishing point of sound before reaching those ethereal vibrations which give us the color red of the solar spectrum. What becomes of the vibrations of these intervening octaves? There are certainly vibrations below these audible to us as above, and colors that our eyes cannot see. The colors of the spectrum from red to violet are as definitely related to each other and to their primaries as are the vibrating notes of a musical scale. If we discern the underlying principle of a medium vibrating rhythmically, according to mathematical proportion, and each sense-perception of a definite sound or color as a response or repetition in consciousness of that particular vibration, we shall discover that every audible sound is a visible color and every invisible color an audible sound, and the basis of consciousness of both sound and color a common coefficient of both. In other words, consciousness holds the ground where sound and color merge in one, and sense-perception corresponds to the varying scales of colors and tones.

Thus the perceptions and sensations bear the same relation to consciousness as does thought, viz., each and all represent changes—orderly and harmonious—in our states of consciousness. The measure of this rhythm, the pattern upon which it rests and builds, is the septenary. That this key-note and octave exist, and are fundamental in nature no less than in man, Professor Crookes has shown in his lecture on the "Origin of the Elements" where elements unite in groups of seven. Equally remarkable was Deslandre's account of his discovery of fourteen lines in hydrogen rendered possible by spectral observations of the sun and stars, resulting in the detection of a striking analogy between these lines and certain harmonies of sound. When we remember that hydrogen is the lightest of known gases, and has long been theoretically regarded as the possible basis of all other elements, and believed to be the nearest approach to Professor Crooke's protyl, we find how closely modern science is treading on the borders of ancient philosophy.

It may be further illustrated with an Æolian harp where a number of strings tuned in unison, and giving forth a key-note, will successively give forth the octave, the third, fifth, etc., according as the air gives a forcible or weak impulse to the strings. The number seven as a unit of measure, and as the universal factor in all common multiples in nature and in life, is everywhere apparent. The functions of respiration and circulation in man show very clearly this same principle, having the octave as a basis. In round numbers, in a perfectly healthy individual, respiration is related to circulation as one to four. If the respiration is eighteen per minute, the pulse-wave will be seventy-two per minute. The impulse derived from the auricular contraction is related to that derived from the ventricles as an octave. If a single impulse of the heart be divided into four parts, one-half of said impulse, that is two parts, are assigned to the ventricular contraction and the first sound, one part to the second sound, and one to an interval of rest. The direct wave arising from the ventricular contraction is followed by another of just one-half its force, though of uniform recurrence. Now illustrate this diagrammatically, and it will be seen that the second wave is related to the first as an octave.

The lunar month of twenty-eight days or four weeks of seven days is well known as the basis of the menstrual function. The quickening of the fœtus occurs in eighteen weeks, the period of viability consists of thirty times seven days. The completion of gestation occurs in forty times seven days. The monuments of antiquity, the symbolism of ancient mythologies and religions, including the Christian, are all based on this septenary division of time. The evidence is overwhelming that this factor is basic and universal in nature and in man, and it would not be profitable to elaborate it here, as any one can examine the evidence for himself. I hasten, therefore, to the special illustrations as furnishing the basis of sight and hearing, and finally of all sensation, thought and consciousness.

The phenomena of light and color, and of sound, occurring in space through the agency of the universal ether, may be apprehended as definite vibrations. Short vibratory undulations produce light and color, while long ones produce sound. Thus, upon the length, amplitude and intensity of the vibratory wave depend the quality of color and sound. Mixed, pure, concordant and dissonant tones depend on the combinations of waves, according to the septenary basis, and the same may be said of the laws of harmony in color.

Now the apprehension of all these varying phenomena and their transmission to human consciousness imply the same ethereal vibrating medium within the body as without, and instruments capable of cognizing, repeating, or duplicating each specific vibration. The soul of man has been aptly compared to a "harp of a thousand strings," and this is far more fact than fancy. In order to cognize the phenomena of nature in these two realms of sight and hearing, the ethereal basis and organic development must be an epitome of the whole. Whatsoever nature is in magnitude, in substance, form, or energy, that, potentially at least, man is in miniature. The eye is essentially a space-organ, and the ear a time-organ. Time is the phenomenal aspect of duration. Infinity, itself forever concealed, yet manifests as rest and motion, or space and time. The phenomena of space and time, all that the eye can see of space and color and all that the ear can sense of sound and harmony through the organs of sense, are made apprehensible as changes in our states of consciousness. What space is to the phenomena of visible nature, the all-pervading and all-containing, that consciousness is to the sense-motor and intellectual life of man. The consciousness of the individual is *one;* his organs, senses, feeling, and mental states are many. The consciousness of man, therefore, corresponds to abstract space, the noumenon of all phenomena. As space in the outer world is the all-containing, so consciousness in man is the all-container. As cosmic intelligence in the outer world manifests as law, determining order and harmony, even so the intelligence or mind of man relates him to the outer world, and presents it to his consciousness in miniature. We thus see how man in every part of his being is involved with and evolved from universal nature, so that when fully evolved he will be its perfect epitome.

If, now, we realize how large a part of man's conscious life is apprehended through the phenomena and organs of space and time, and if we find, as representing these, in light and color, and in sound, the rhythm of all vibrations and the harmony of all combinations determined by the octave or septenary basis; and, furthermore, the interval between the highest audible sound and the lowest vibration as visible color already defined by science, approximately, at least, as thirty-four octaves, thus taking the whole range of etheric waves from the lowest note of the grand organ to the violet ray of the solar spectrum, we are forced to one of two conclusions, either the analogy breaks, and the basis of harmony fails, or we are forced

to the conclusion that the septenary division as the basis of harmony in light and sound so completely demonstrated in the functions of sight and hearing, is basic in the whole organism of man, and thus affords the key to psychology.

A still further conclusion remains to be drawn. The basic or permanent factor in the life of man is consciousness. All mental states, like all perceptions, sensations, and emotions, occur as changes in our states of consciousness. Helmholtz has shown that the difference between consonant and dissonant intervals is not merely arbitrary, but is the result of the nature of the intervals themselves. The effect of discordant intervals or tones is expectancy, discomfort, unrest, while the effect of concordant intervals is just the opposite, thus showing the intimate relation existing between the conscious life of man and universal nature. Aside from all changes occurring in our states of consciousness, consciousness itself may exist on different planes. That is, while still subject to constant change in momentary experience of phenomena, it may change its entire relation as to planes in space.

The reason why comparatively little progress has been made in psychology, is because the true relation of thought or mind to consciousness has been overlooked. This true relation is best discerned from the basis of synthesis evolved to a complete system of philosophy. Such a philosophy is concealed in the Rig Veda and furnishes the key to the Upanishads. It is, therefore, among the oldest of literatures. Pythagoras and Plato derived from this source their entire philosophy, while Descarte, Leibnitz, Spinoza, and Schopenhauer, each gained lasting fame from a few of its fragments.

The consciousness of man displays itself on seven planes, each plane divided into seven sub-planes; and all these planes and sub-planes are derived from and correspond with like planes in universal and eternal nature. It is true that it would be difficult to demonstrate this in the present stage of man's evolution, and that it would require a good sized volume to outline and illustrate it. But it may be easily grasped as a philosophical concept, and we shall then find that all that we know of sound and color justifies this concept, and that if the law of analogy holds, the law that underlies sensation and perception here is common to the whole range of man's sensuous and intellectual life. The idea regarding the physical universe is of one substratum, universal and

eternal, differentiating into seven planes; and each plane is to be regarded as related to the next by definite wave-lengths or rates of vibration of the one universal substance. This inherent and definite relation enables substance from one plane to be converted into that of another by a change of vibration, and as a tone in music may sweep throughout the entire range of the octave and pass on to the next, so any substance in nature may be transferred from plane to plane by a change of vibration of its atoms or molecules. This is what actually occurs when water is converted into steam, and is the principle by which the "radiant matter" of Crookes and the "inter-etheric force" of Keeley are derived.

Now, if man be regarded as an epitome of nature, and as Dryden expressed it, "The diapason closing full in man," then every principle in nature, either potentially or actually, must be represented in him. It is the diversity and complexity of man's nature that bewilder, and in the absence of any key to its comprehension confusion alone reigns. Consciousness is the basis of man's sensuous and intellectual life. All avenues of feeling, sensation, and perception lead to and merge in consciousness; and all mental changes and intellectual operations occur as changes in our states of consciousness. If there are really seven planes in the differentiation of matter in nature, then corresponding therewith there are seven planes of consciousness in man. It may be impossible to demonstrate this empirically at present, but it may be justified by analogy and sound philosophy.

We speak of persons in syncope and under the influence of anæsthetics as unconscious, when this is really not the case. They have, it is true, lost for the time ordinary consciousness of sensation in the tissues, and of outward things, but they are still conscious on other planes, of which perhaps only a glimpse remains in memory.

Consciousness is regarded as the changing, evanescent factor, and mind as the real substratum, when the fact is precisely the opposite. Now, in the ordinary affairs of life, we are more or less familiar with three planes of consciousness, viz., the ordinary waking state, the dream state, and the condition of dreamless sleep. Memory, however, is something as distinct from consciousness as is thought or perception. To say that we are entirely unconscious is one thing, to say that we have no memory of any event is quite another thing. Memory is the principle and the process of association of events and

ideas occurring in consciousness. If there are no events, no ideas, no changes, then there are no elements for association, and hence no memory. We may say, that for the time, the bodily avenues are closed to sensation and perception, and that the brain ceases to function, and hence, that for the time, there is no thought. We are, then, not sensitive, not perceptive, toward outer nature, and we are unthinking but never unconscious. The missing link is memory, which fails to connect the shifting experiences of outer life with those of dreamless sleep, syncope, hypnotic states, anæsthesia, and the like, while to say that we lose consciousness is to entirely mistake its nature.

In day-dream or reverie, we are as unconscious sometimes of the outer world as in dreamless slumber, the difference consisting in the function of memory, and this is often largely absent or in abeyance in reverie. Experiments in hypnotism give many facts in full support of this line of reasoning. No one pretends to say that the subject in hypnotism is unconscious, and the hypnotizer can determine whether the hypnotic consciousness shall be connected with that of ordinary life by the link of memory or not. If we regard all these varying conditions as a shifting of our planes of consciousness, and in no case as loss of consciousness itself, a great deal of obscurity will disappear from the realm of psychology. In delirium, monomania, hallucination, alcoholism and insanity, the planes of consciousness become disordered, disjointed, or wholly changed.

It is the orderly association of ideas that is disturbed. Undue prominence is given to one idea, and it becomes a hallucination. Its relation to consciousness is therefore abnormal and the whole mental realm "deranged," while consciousness, *per se*, remains unaltered. Consciousness is like a double mirror presenting one face to the phenomenal world of change, reflecting the shifting panorama of the mind, and indirectly, through the mind, the sensations derived through the avenues of feeling and emotion from the outer world. The other face of the mirror is turned within towards its original source in the principle of cosmic ideation, or the ideas of eternal nature.

At least two distinct planes of consciousness were long ago recognized by medical science in the so-called double consciousness of somnambulism. Here the individual leads two distinct lives, with no connection between them except that they exist in the same indi-

vidual. The case of Barkworth, quoted by A. Moll, who can add up long rows of figures while carrying on a lively discussion without allowing his attention to be at all diverted from the discussion; or of a lecturer, F. Myers, who, for a whole minute, allows his mind to wander entirely from the subject in hand and imagines himself to be sitting beside a friend in the audience and to be engaged in conversation with him, and who wakes up to find himself still on the platform lecturing away with perfect ease and coherency, serve to show separate and distinct planes of consciousness as existing in man. The philosophy of acquired habit, or automatism, whether muscular or intellectual, only confirms this view of multiple planes of consciousness; for the body, no less than the mind, the senses and feelings, no less than the intellectual, pertain to our states of consciousness.

I have thus dwelt on this principle of consciousness because I regard it as a matter of the very greatest importance, and the point of departure from which all mental processes and intellectual operations should be studied. Consciousness, *per se*, is the one persistent and unchanging factor in the life of man. Its function is to note the changes that elsewhere occur. It is hence the noumenon of all phenomena, the citadel of the soul, the spark of the infinite in the finite being, man. Consciousness is to man what the pure white ray is to the solar spectrum. The pure white light is the vehicle of the rainbow, the chariot of the sun; and whenever this vehicle divides and differentiates it does so with mathematical exactness and with perfect proportion or rhythm into planes of seven. Helmholtz says the musical scale, with its recognized intervals and laws of harmony, are "not merely arbitrary," but "are the result of the nature of the intervals themselves." If these planes and principles exist in nature under the universal laws of harmony and order, and are apprehensible to man as such through his bodily organs and functions in the realm of consciousness, then all that the musical scale is in the realm of sound, and all that the solar spectrum is in the realm of light, such also I think are the planes and principles of consciousness in the life of man. Consciousness is *one*, persistent and itself unchanging, while noting all other changes and reflecting every state, and its key is the octave or the universal septenary in nature.

"Thus we see that from the prime original (nature) infinity are

evolved by means of definite proportions of it either in rest or in motion, the various measures of space and time, the lines and metres, and in a manner so analogous that they must be considered counterparts of one another. And these lines and metres, by being mingled in an infinite variety of ways, become the forms of space and the rhythms of time. These forms and rhythms are then made manifest by vibrations to the eye and ear, and so are clothed by them, as it were, with colors and tones. In its innermost nature, therefore, the forms in space and time (though seemingly so totally unlike) are in reality only different manifestations of one idea—visible nature and music are æsthetically considered counterparts of one another."

PUERPERAL INSANITY.

By A. P. Williamson, M.D., Minneapolis, Minn.

The most fearful calamity which can possibly befall the puerperal chamber, not excepting death itself, is insanity. The term puerperal insanity, like many expressions in medical nomenclature, has been used in a most careless and elastic manner, and has been made to do service in describing every variety of mental alienation connected in any way with child-bearing, from the mental disturbance sometimes seen in neurotic subjects during the early stages of pregnancy to that which follows the exhaustion of prolonged lactation, two years after delivery.

This evening we propose being more exact in our use of this term, and to confine the meaning of puerperal insanity to its most contracted sense. We shall limit the use of the phrase to describing a condition of departure from mental health coming within two weeks after labor.

The basis of this paper will be thirty-nine cases of puerperal insanity, which came under the writer's care while first assistant physician at the hospital for insane at Middletown, N. Y.

The disease is fairly prevalent, and about 4 per cent. of all cases of insanity are of this variety. It is said to follow once in every four hundred deliveries.

It is also claimed to be more frequent in obstetric hospital service than in private practice, and it seems to vary, too, in hospitals. In Bellevue, one of the largest of the general hospitals in this country, the proportion of such cases to the number of deliveries reaches the appalling figures of 1 to 80. In Westminster, London, the proportion is 1 to 382, and in the celebrated Dublin Obstetric Hospital the proportion is only 1 to 528. I have no statistics at hand to show the proportion in private practice, but it is asserted that fewer cases occur than in hospital work. All forms of insanity are seen among these patients—melancholia, mania, dementia, and general paresis.

Mania is said to be the form in 75 per cent. of the cases, melancholia in about 20 per cent., and the other two varieties much less frequently.

Before discussing a typical case, we will describe a mild form which is occasionally seen in young women who inherit strongly a neurotic tendency, and in whose unmarried life they displayed indications of hysteria. In such cases, a few days after labor, when everything is apparently doing well, there suddenly develops an intolerance of husband or child, a wilful disregard of the doctor's directions, a peevish irritability of temper toward everybody, accompanied by restlessness, sleeplessness, and constipation. There is no especial rise of temperature or diminution of the discharges.

These symptoms characterize the mildest form of puerperal mania.

The treatment consists of the removal of any discoverable cause, absolute rest of body and mind, freedom from the exhausting influences of talkative friends, weaning the baby and its removal from its mother's sight and hearing, restricted diet, and the exhibition of the properly indicated remedy, which is most frequently Aconite.

As a rule, these changes in the care of the case are sufficient to remove the symptoms within a few days. In a few cases, unfortunately, the symptoms just described are the forerunners of a more serious illness.

In the typical form of puerperal insanity the disease may be sudden in its onset, but, as a rule, it is gradual, and is preceded for some days by the symptoms we have already given you, or else by suppression of the lochia and milk, high temperature, rapid pulse, dilated pupils, flushed face or pallor of the face with quick flushing, great physical restlessness, and constant talking. There is also an irascibility and great mental unrest. Soon she begins to place every one's motives under suspicion; she talks very rapidly and sometimes incoherently; she mistakes the identity of her nurse, doctor, husband, or parents; takes strong and unaccountable dislikes to those nearest and dearest to her; charges them with unkindness and neglect.

She is sarcastic in her statements and imperious in her demands. All these symptoms within a week or ten days increase in violence, and others are added, until finally there in an outburst of uncontrollable frenzy. After the appearance of violence, delusions and hal-

lucinations follow. She carries on conversations with imaginary persons, or she imagines herself poisoned, or she entertains the delusion that she is some royal person. At this stage, an impulse to kill her husband, child, or herself may appear. It is likely that among the prominent symptoms at this time is nymphomania, displayed by a desire to expose her person and by the use of the most obscene language. Unless she is now too incoherent to be understood, she is quite likely to charge her husband with marital infidelity. In a small proportion of cases the earliest symptoms which appear are the opposite to those described, and consist of a disposision to be unnaturally quiet and taciturn, with an inclination to be alone and to gloomy conversation. She may entertain delusions of a depressed character, and imagine she is unworthy of her husband, or that she has been very wicked, with a strong desire to commit suicide. The physical symptoms in the melancholic type are asthenic. The temperature is usually slightly subnormal, the skin is dry and harsh, the extremities are cold, the tongue is coated a brown or dirty-white, and there is persistent constipation. Sleeplessness is a prominent symptom in all forms of this disease. Puerperal insanity is peculiarly liable to attack primiparæ and those who have borne few children. The exhaustion which follows too frequent maternity has very little, if any, influence in its production. In our thirty-nine cases, twenty were primiparæ, seven had two children, five had three, four had four, one had seven, and two had eight. Thus, 51 per cent. had but one child, 41 per cent. had between two and five children; that is, 92 per cent. had given birth to less than five children, and only 7 per cent. had more than five children.

On studying our cases we find the most frequent remote cause to have been an inherited predisposition to diseases of the nervous system. Thus, twenty-one, or 52 per cent., displayed a history of insanity in their immediate progenitors—ten from the mother's side, eight from the father's side, and three from both sides; and in every case in which the disease attacked those who had borne more than one child, this inheritance was very strong, and in three such instances the insanity was inherited from both paternal and maternal sides. In only six instances was this inheritance denied by the friends. In twelve cases the histories were incomplete, and it was unknown whether these persons received a neurotic inheritance or

not. It is probable that many of these last-mentioned patients did possess a neurotic taint, and consequently such a family tendency probably existed in our cases more frequently than shown by our figures.

In three cases a previous attack acted as the remote cause. Anæmia was asserted to have been the cause in three cases. Getting up too soon after labor was assigned in three instances. Illegitimacy was alleged to have produced two cases, and in nine cases no remote cause could be assigned by the friends. The exciting or producing cause in five cases was overwork; five others were caused by excitement too soon after labor; worry is chargeable with seven cases; procidentia, too rapid maternity, exhaustion, and puerperal fever, are each held accountable for one case. The cause in thirteen cases is, unfortunately, unknown.

Late maternity has been said to be a factor in the causation of this disease. While a fair proportion displayed an age beyond that at which most women bear their first child, yet none were very far advanced in the child-bearing period. One was less than twenty years old; fourteen were between twenty-one and twenty-five; ten were between twenty-six and thirty, and fourteen were between thirty-one and forty. Of the primiparæ one was less than twenty, twelve were between twenty-one and twenty-five, two were between twenty-six and thirty, and five between thirty-one and forty. We find, among the multiparæ, only two patients were under twenty-five, eight were between twenty-six and thirty, and nine were between thirty-one and forty.

It is claimed by Dr. Duncan that the height of fecundity is reached at twenty-five. Measured by this standard, eighteen of our thirty-nine cases had passed the zenith of the child-bearing period before they had had their first attack of insanity.

Scotch authorities lay especial stress upon illegitimacy as a cause. In our experience this is one of the most infrequent causes. Only two of our patients appear as having fatherless children. These women both belonged to the lower stratum of society and were not worried particularly by this evidence of their lapse from virtue, and both of them possessed a neurotic inheritance.

In seventeen cases, or 43 per cent., the disease developed on or before the fifth day after labor, as follows: five on the first day, two on the second day, three on the third day, one on the fourth day,

and five on the fifth day. One patient showed the first symptoms on the sixth day, and ten on the seventh day. It will thus be observed that twenty-eight cases, or more than 71 per cent., developed the disease during the first week after labor. Eight cases displayed the symptoms first on the tenth day, one on the eleventh day, and two on the fourteenth day. The most dangerous days, therefore, seem to be the first, third, fifth, and seventh. In regard to sex of child our experience is in accord with the accepted impression—that the disease more frequently follows the birth of male children than female. The thirty-nine mothers bore forty children. Of this number twenty-seven, or 69 per cent., are recorded as male, and thirteen, or over 30 per cent., were female children.

In fifteen cases, or 38 per cent., of the thirty-nine, the labor was said to be either severe, protracted, or instrumental. In seven cases the labors were natural. In the large number of seventeen patients, or 41 per cent. of the cases, the character of the labor was unascertainable. The proportion displaying some complication in the labor is larger than usually obtained in labors not followed by insanity. It is, therefore, a fair assumption that the character of the labor exerts some influence in the causation of the disease.

The attack was said to have been the first in thirty-two cases, or 82 per cent., the second in six cases, and the third in one case. From this one would judge that one attack does not predispose to others. Only four cases had puerperal mania previously, and the other three women had attacks of insanity previous to their marriage. In recent years there has been a disposition to ascribe sepsis as a cause of nearly all forms of disease, and puerperal insanity has not escaped the charge. In the thirty-nine cares referred to, only two were preceded by any symptoms of septic poisoning, and there is a doubt in the writer's mind whether in either of these cases there existed the relation of cause and effect. One patient had, according to the history, a mild run of puerperal fever, and the other had eclampsia during labor. A few years ago it was the writer's privilege to see over forty cases of puerperal fever, in an obstetric hospital, and, as far as his knowledge goes, not one of these cases subsequently became insane.

The prognosis in this disease is, as a rule, favorable. The general physical state of the patient at the time the disease comes on has a marked influence over the result. Twenty-seven of our cases recov-

ered, about 70 per cent. of the number treated. One patient came in moribund, and died a few days afterward. Three patients were discharged improved. Two were discharged unimproved, and six were still under treatment when the statistics were gathered.

The treatment of puerperal mania or melancholia consists of isolating the patient from relatives and solicitous friends, whose presence, as a rule, has the undesirable effect of increasing the patient's excitement, and thus aggravating the case, carefully selected diet and the proper remedy.

If the case must be treated at home, two thoroughly efficient, trained nurses are necessary; one for day duty, and the other for night. Whenever restraint can be dispensed with, it should be done, of course; but in the majority of the maniacal cases, some kind of restraint is absolutely necessary. Never permit a patient to be tied down to the bed by sheets, but obtain from an instrument-maker a good, strong apparatus, which will hold the patient, and in which she will be entirely comfortable. The writer does not wish to be understood as advocating mechanical restraint to the insane; on the contrary, he is a strong partisan, favoring the non-restraint system, and has frequently employed his pen and voice in upholding the abolition of restraint. In insane hospitals there are very few cases in which restraint is excusable, but in private practice we do have recourse to the protection-sheet to prevent the patient from hurting herself or some one else. Diet is of the utmost importance in the treatment of these cases. Hot milk is our sheet anchor; it should be given often, and it is well to add a teaspoonful of bovinine or Murdock's food to every cupful. Other prepared foods, such as Mellen's and Horlick's, are of value. In some cases, Cibil's and Armour's beef are needed. Some food should be given every three hours, and during the violent stages it may be necessary to give it at two hours intervals. It must be borne in mind that one of the principal symptoms to combat is exhaustion.

The patient's chance of recovery largely depends upon whether she has the strength to weather the maniacal cyclone, so that food must be pushed as far as her stomach will stand it.

The drug treatment is largely confined to those remedies which are most useful to combat feverish conditions and the opposite state of exhaustion. As especial remedies, we find Acon., Ars., Bapt., Bell., Cimicif., Canth., Gels., Hyos., Stram., and Verat. vir. Sometimes, Ign., Nux vom., Platina, and Verat. alb., are useful.

When there is great incoherency, restlessness, flushed face, a tendency toward violence with an evident strong desire to strike and bite those standing near from anger, accompanied by hallucinations of sight, we have found Bell. especially useful. When the patient is noisy, singing, laughing, and very talkative, using obscene and profane language, violent towards everybody, but good-natured, or a condition of mental confusion, with suspiciousness and changeable conduct, Hyosc. has been used with good effect.

When hallucinations of hearing are the particularly marked symptoms, with a desire for company, and a fairly good-natured condition, but quite changeable, the temperature about normal, Stram. is a most excellent remedy.

Verat. vir. has helped very many cases when the patients are very suspicious and imagine they are to be poisoned, with great restlessness, flushed face, high temperature and rapid pulse.

I will not take up your time by mentioning the indications for any more remedies.

In our experience we have rarely been obliged to go beyond Bell., Hyosc.. Stram., or Verat. vir., in maniacal cases, and Acon., Cimicif., Gels., Ign., or Verat alb. in cases of melancholia.

The earlier the treatment is begun the better. The chance for speedy recovery is better in a hospital than at home. Select your remedy with great care, and stick to it. Give easily-digested food, and give it often. Avoid hypnotics and narcotics as you would death, and a large proportion of your puerperal insanity cases will recover.

THE CAUSES OF AN INCREASE IN MELANCHOLIA.

By William Morris Butler, M.D., Brooklyn, N. Y.

"No creature so miserable as man," saith an ancient writer; "so generally molested, in miseries of body, in miseries of mind, miseries of heart; in miseries asleep, in miseries awake, in miseries wheresoever he turns." "All his days are sorrow and his travels, griefs; his heart also taketh not rest in the night." "All that is in it is sorrow and vexation of spirit."

This wail of despair, borne to us from the earliest pages of the world's history, is re-echoed to-day in the cry of every melancholiac. This cry has swept through the centuries. However much brightness and sunshine, joy and gladness, there may be in the world, there are always thousands who, living continually in the shadows, respond only to the minor keys of the diapason of the universe. Many are born pessimists. They behold everything through darkened glasses. Mentally astigmatic, they are incapable of obtaining a correct view of any subject. Never upon the heights of intense joy, any reverse of fortune or severe bodily ailment plunges them into the abyss of despair, from which no exit is discernible except through the portals of suicide. Year by year this multitude swells; day by day these grovellers in this labyrinth of mental darkness rush, in ever-increasing throngs, to our sanitariums and hospitals for the insane. The question, therefore, naturally arises, What is the cause of this increase of mental sufferers? Are there any conditions prevalent in these latter days which may be considered responsible for this result? Are there any agencies at work particularly devitalizing to the nervous system?

One agent, certainly unknown until within the past three years, can be assigned to this category, viz., "la grippe."

What particular atmospheric or telluric condition has made possible our annual visitation by this previously unknown scourge medical science has thus far failed to demonstrate. Whatever may prove to be the correct theory of its origin and continuance, the

brood of human ills which have followed in its train has been innumerable, its injury to the race incalculable. A veritable "Pandora's casket," with each recurrence it has produced an ever-increasing dread and apprehension. Peculiarly debilitating and prostrating in its effect upon all the vital organs, its disastrous influence upon the nervous system has been particularly marked and striking. A glance at the recent reports of any hospital for the insane will demonstrate that not the least of its ravages have been those which it has made upon the brains of its victims. Without exception, in each of the reports for the past two years of twelve prominent institutions which we have consulted we find this dread visitor figuring as an influential causative agency, in numbers of the cases which have been admitted. Nor can we limit its effect merely to those mental diseases directly traceable to its influence. The intense prostration and debility always accompanying its invasion, by profoundly lowering the general nervous system, must in many instances pave the way for the injurious results produced by other influences to which the mental symptoms may be directly traced. Frequently we see that influenza, even when its course may have been of comparatively short duration, sows the seeds which, months afterwards, bring forth evil fruits. When we consider that the underlying foundation of melancholia, whatever may be the immediate exciting cause, is always a weakened and impoverished state of the system, it is almost impossible to estimate the influence which this disease must exert in its production. Surely one cause of the recent increase of melancholia can positively be asserted to be "la grippe."

Another powerful factor may be found in the increased use of large quantities of depressing drugs.

Before the advent and great popularity of Antifebrine, Phenacetine, and numerous other marked heart depressants, we seldom heard of the now trite cause of death, heart-failure. No reflecting mind can fail to believe that the effect of reducing the temperature several degrees, and the heart's pulsations twenty to forty beats, in a few hours must be injurious. Nor is the use of these drugs confined to the prescriptions made, in suitable cases, by competent, legally qualified physicians. Scores of individuals, accustomed to find relief from severe neuralgia in antifebrine, frequently take it upon their own responsibility. So common has this custom become that hundreds daily receive it over the counters of soda-water fountains, in

the drug stores of every large city. How much damage is done by the self assumed medical rôle of multitudes of drug clerks, incapable of acting in this capacity, no one can estimate. That much injury has been done by these drugs, is apparent from the change of attitude which the Allopathic fraternity now holds regarding them. The Old-School journals are now constantly filled with warnings against their injudicious and indiscriminate use. While it is impossible, directly, to trace to their employment all the injurious effects which they have produced, it is positive that they have done much harm, and, without doubt, their depressant effect has been the indirect cause of plunging many into the depths of melancholia.

The universal prescribing of enormous doses of Quinine, by Allopathic physicians, and its extensive use as a household remedy, not requiring the advice of a physician, can also be credited with much injury in this direction. Knowing, as we do, from personal observation, that Quinine is capable of causing insanity in many persons especially susceptible to its effects, we cannot doubt that many cases of melancholia are directly traceable to its influence. For proof of the alarming increase in the use of this drug since the advent of influenza, we need but consider the amount now sold by druggists in comparison with former times. That Quinine is far from being the harmless drug it is supposed by the general public to be, any one acquainted with its physiological action can testify. When one reflects upon its depressing and disastrous effects upon the brain, when given in large doses, it need cause no surprise that its continuous use should in many cases give rise to melancholia. Creating, as it often has, temporary hallucinations of sight and hearing, and marked delusions, the step is but slight to the establishment of a condition of positive insanity. For a corroboration of this statement we need but refer you to the history presented by us, and published in vol. xxv. of the *Transactions* of the Homœopathic Medical Society of the State of New York. In this case we had an opportunity of tracing the effects of an Allopath's drugging with Quinine until the patient, finally crazed by its action upon his sensitive brain, jumped out of the second story window of his house. How many more remaining under Allopathic treatment, with their disease shrouded under another name for the protection of the physician in charge, have suffered in a like manner must remain unwritten history.

The ever-increasing worry of modern life and business troubles is another powerful agent to which we must look for an explanation of the present lamentable condition of affairs.

When we consider the gigantic enterprises conceived and executed by the men of modern times, and the tremendous financial burdens continually borne by them, it is not to be wondered at that hundreds fall beneath its weight. Nor is the result of these disasters limited to the individuals themselves. Wives and children and the entire families are involved, and, in too many instances, their mental strength not proving sufficient to stem the tide of misfortune, they are swept into the vortex of despair.

Another factor, each year more and more potent in its injurious effects, is the excessive forcing process of our present school system. Weak and strong alike, regardless of individual idiosyncrasy, are subjected to the same pressure. Healthy, natural brain growth and development is impossible. Hours that should be given to sleep or out-door recreation must be devoted to the preparation of lessons for the succeeding day until, when sleep is sought, the brain is unable to cease its excessive activity, and all night long fractions and decimals, straits and rivers, verbs and adjectives are mingled in the distressed dreams of the over-wearied sleeper. Is it any wonder that such a preparation for life's work and duties proves so often a preparation for a living death? With brain force weakened or turned into false channels, how many, as a result of this mistaken system, pass years of hopeless misery in the unfathomable darkness of incurable melancholia. To prove that this is no fancy sketch, we need but glance at the case-book of any nervous-disease specialist, or the records of any hospital for the insane. Nor are the numbers of future victims from this cause likely to diminish until a radical change shall be made in the present system of education by our boards of education and our educational institutions in general.

Another pernicious evil apparently upon the increase is the frequent production of miscarriages by women of every class. The name American has become synonymous with greed for gain. The accumulation and transmission of colossal fortunes is regarded as the acme of human ambition. With no law of primogeniture in force, this is impossible if wealth, although great, must be divided among many children. This desire, together with the demands of fashionable society so entirely conflicting with the duties of mother-

hood, render child-bearing among the rich unpopular and intolerable. With the poor, scanty comforts, divided among increasing numbers, become positive want and give rise to the same desire. With such ideas permeating all classes of society, it is no wonder that our newspapers are continually filled with cases of unfortunates who have lost their lives through trusting themselves to professional abortionists. The cases published, however, are but the smallest fraction of those who live through similar operations. Yet, while escaping immediate death, multitudes have their constitutions undermined, and sow the seed of future mental disease. The general shock to the nervous system is often too great to be rallied from, and after years of suffering they at last sink into hopeless melancholia. Nature's laws are inexorable, and this is but one of numerous instances where the offender finds that the punishment is severe and unavoidable.

Another cause, less universally effective, is the increasing prevalence of cigarette smoking among children. Of the evil effects of this habit upon all classes, there can be no doubt, but when it is formed and indulged in by children ranging from toddlers of four to youths of fifteen, the injury must be tenfold increased. The poison of nicotine is especially powerful in its effects upon the developing nervous system, as is proven by the pinched faces and dwarfed forms of the numerous street arabs of all large cities, who almost from babyhood are devotees to this habit. That the depression of this poison plunges many into insanity is proven by hospital reports; that the numbers here recorded, however, do not anywhere near represent all the cases so produced is also without doubt, as in many the disease is assigned to some other direct cause, while in reality the first seeds might be traced to this habit. The laws enacted for the lessening of this evil are most needed, and every physician should do his utmost to enforce them, else the mental wrecks from this cause must yearly increase.

Disappointed ambition, the dissipations of fashionable life, with too little sleep, too little exercise, and too constant confinement within doors, irregularity in eating and drinking; in fact, an almost incalculable number of agencies might be named which, while slight in their individual effect, in the aggregate produce a most powerful depressing influence upon the general system, rendering it hypersensitive to any direct exciting cause, and tending to overthrow the

reason, dry up the sparkling fountains of joy and hope, and substitute the waters of bitterness and despair.

How is this increasing tide of evil influences to be stemmed? Can nothing be done to shield the masses from these pernicious influences? Must multitudes of melancholiacs continue to daily swarm into our hospitals and sanitariums or seek rest in suicide? Are we simply to stand still and hopelessly look on? Certainly, the general medical profession need not be powerless in the face of these appalling facts. A successful crusade could be waged if the profession were once aroused to its duty. The ignorance and thoughtlessness of the people is one great cause of so many offences against nature's laws. Our mission must be educational as well as curative. Let the community, through the high school and college, be taught regarding hygiene and the general laws of health. Impress upon the masses, wealthy and poor, educated and ignorant alike, that nature is merciless in her punishment of transgressors of her laws. Teach men that attacks of hopelessness and despair which so often cloud the mental horizon are but the reflex of disordered natural functions and nature's warnings against violations of her laws. Teach men how to live when in health, and each year melancholia will become less and less common, and soon suicide will be unknown.

SOME STATISTICAL FACTS CONCERNING INSANITY.

(Being a Résumé of the Statistical Reports of the Middletown State Homœopathic Hospital, from 1874 to 1892, inclusive.)

By George Allen, M.D., Middletown, N. Y.

Believing that, as Homœopathists, we are all interested in the work done by our public institutions, I have brought together, in the following paper, certain statistical facts concerning one of the most prominent Homœopathic institutions in the State of New York —the Middletown State Homœopathic Hospital.

Your attention is invited to the results, along certain lines, of insanity under Homœopathic treatment, as seen at the above-named hospital during the last nineteen years.

The Middletown State Homœopathic Hospital was the first institution of its kind in the world, and though several other States now have Homœopathic hospitals for the insane, it still remains the most extensive Homœopathic institution of its kind.

This hospital was opened for patients in April, 1874, the first patient being received May 7, 1874. During the balance of that hospital year, there were treated a total of 69 patients. During the last hospital year, ending September 30, 1892, there were treated 1104 patients. The average number under treatment during the last nineteen years has been 323. To care for these patients, the daily census at present being about 1000, requires large buildings, valued at over $1,000,00; a medical superintendent and staff of six physicians—five men and one woman; about 150 male and female nurses, and other employées enough to swell the number to 200; making the total number resident at the hospital, including patients and employées, about 1200.

This establishment was maintained last year at a cost for current expenses of $168,292, the income for this purpose being derived from amounts paid by counties and private individuals for the care of patients.

Witnessing the growth of this, and other great State and municipal hospitals for the insane throughout the land, we are led to inquire if insanity is not rapidly increasing?

The last census of the United States discloses an increase during nine years previous to 1890 of 41,330 insane persons in public and private asylums, being an increase of 73.53 per cent. over that of the previous census. Concerning this fact, however, the superintendent of the census says: "The percentage of increase, when compared with the percentage of increase of population in the last decade—namely, 24.86 per cent.—does not indicate an increase in the proportion of insane persons to the population, but rather a great increase in the amount of asylum accommodation provided, and a willingness on the part of the public to make a full use of all the facilities thus provided."*

Just here we digress to remark upon the misleading nature of statistics when not properly interpreted. Most of us would have inferred that an increase of 41,330, or 73.53 per cent., in the asylum population during nine years might be construed into a warrant for the belief that insanity was increasing; but the kind-hearted superintendent of the census allays our fears, and assures us that this means simply that the people have built more asylums, and are willingly patronizing them. Thus early we learn the lesson that it is unsafe to roam in statistical fields without a guide.

The whole number of patients admitted to the Middletown State Homœopathic Hospital during nineteen years was 3629, of whom 2775 were discharged—1352 having recovered. Analyzing these recoveries, we find one very important fact—a fact well worth remembering, one in which all alienists are agreed, and which, after all allowances have been made, statistics seem to confirm—namely, that a majority of recoveries among the insane come from among those patients who are put under hospital treatment and regimen early. Of those who came under treatment during the first six months of disease, over 53 per cent. recovered; while still earlier hospital treatment gives still better results. On the contrary, the longer treatment is delayed, the smaller does the percentage of cures become. So that, it may be considered as true, that recovery from insanity is in an inverse ratio to the duration of the disease. Still further analysis

* Robert P. Porter, *Census Bulletin*, May 9, 1891, p. 1.

shows that 76 per cent. or more than three-fourths of those who recovered did so in less than one year; while 48 (per cent.?) of the number recovered in less than six months, which would seem to show very clearly that the chances of recovery diminish quite rapidly after the expiration of the first year of the disease.

Of the different forms of insanity, acute melancholia has been the most numerous, there having been 907 cases, with a recovery rate of 56 per cent. Cases of acute mania, while not quite so numerous, have given a larger number of recoveries, namely, 69 per cent. There have been treated 449 cases of subacute mania, of whom 201, or 45 per cent., recovered. Under the head of subacute mania are included cases of paranoia. Of acute delirious mania, or typhomania—the *delire aigu* of the French—we have had 25 cases. Three only have recovered, a percentage of 12; while 20, or 80 per cent., have died, thus demonstrating the severity and extreme fatality of this form of insanity. Of 337 cases of chronic mania, 12, or 3.5 per cent., have recovered. Recovery from chronic mania is very rare, but does sometimes occur, and may do so after long periods. And yet these patients, even though capable of performing with propriety the duties belonging to their social or civil position, are likely upon minute examination to disclose traces of mental weakness or mental disorder. Our statistics show that recurrent mania, which includes circular mania, is practically incurable, although the periods of remission in this form of insanity are undoubtedly oftentimes of such great length that cases have frequently been reported as recoveries by careful and conscientious observers, being classified, of course, under some other designation.

Alcoholic insanity shows a recovery rate of 89 per cent., there having been 51 recoveries from 85 cases. These cases, however, furnish a large number of recurrent cases, because the patient quickly returns to his unfortunate habits on being released from the hospital. Of insanity from masturbation, 23 per cent. of our cases have recovered. Epileptic insanity has furnished 115 cases, with but two recoveries; while general paresis, though present to the number of 186 cases, has thus far defied all efforts at cure, and we are unable to report a single recovery from this protean disease. By careful hospital treatment, however, the duration of life of the paretic has been lengthened, so that now it is not uncommon for

these patients to live eight or nine years, whereas formerly two or three years was considered the limit of their lives. Acute primary dementia, though a rare disease, has a large recovery rate. Of 37 cases, 33 recovered—a ratio of nearly 90 per cent. (89.2). Terminal dementia furnishes 527 cases, with no recoveries but with 102 deaths, being a death-rate of about 20 per cent.

Concerning these recoveries, it should be stated that the rate is fully as high as the results obtained at any of the Old-School hospitals, and they have all been obtained under purely Homœopathic treatment—a fact which, if it proves nothing else, seems clearly to demonstrate that the hypnotics, opiates and neurotics, and multitudinous drug-preparations of our Old-School brethren are, to say the least, unnecessary in the treatment of insanity.

Concerning the causes of insanity, it cannot be claimed that statistics add much to our knowledge. Under this head an attempt has been made to give the assigned causes only, and in obtaining these the authorities have been guided largely by the statements of the relative or friend who happened to accompany the patient to the hospital. Such persons are frequently entirely ignorant, while some are guided in their statements by personal theories and opinions, and fail to make a scientifically accurate statement. Thus a person who had at one time in his life been intemperate, and at another time very religious, would be likely to have his insanity attributed either to intemperance or excessive religious zeal, according as the person giving the information happened to be a "temperance fanatic" or an anti-religionist; whereas the real facts might be that the intemperance, the religious excess, and the insanity were all due to an inherited or acquired neurotic condition predisposing to these peculiar manifestations.

The Middletown tables show that of the remote causes heredity plays an important part; while predisposition due to the long-continued action of vicious habits, exhausting diseases, or neurotic tendencies of various kinds, swells the list.

Among the exciting causes, worry, intemperance, masturbation, overwork, and domestic troubles contribute the largest numbers in the order named.

The relation of marriage to insanity, if it has any, is shown by the following table:

	Males.	Females.	Total.
Single	47.3	35.6	41.6
Married	46.	50.	48.4
Widowed	5.4	12.8	9.

Showing that among the admissions at Middletown, the percentage of single men has been larger than that of single women; while among the married, the percentage of women has been larger than that of men.

During nineteen years, the number of admissions shows that the sexes have been very equally represented, the total for the entire period showing an excess of only sixty-five males.

Concerning the nativity of the patients, the following is true:

Two thousand seven hundred and fifty-two, or 75 per cent., are native born; while 875, or about 25 per cent., are foreign born. Of the foreign born, Ireland furnished the largest number, viz., 334, being 38 per cent.; Germany coming next with 206, or 23 per cent. of the foreign born. Thirty different countries have been represented among the patients at Middletown. Patients have been received from fifty-four of the sixty counties, comprising the State of New York. The largest number of patients have been residents of Orange, the county in which the hospital is located; while New York, Ulster, Suffolk, Sullivan, Kings and Queens counties, have contributed in large numbers, and stand numerically in the order named.

The average annual mortality rate during the entire period has been 4.99 per cent. upon the whole number treated; while the mortality rate, computed upon the whole number of admissions, has been about 11 per cent. These facts are not particularly valuable as demonstrating the mortality of insanity, *per se*, because a large number of the deaths arose from causes having little or no connection with insanity.

Of the deaths, it appears that 28 per cent. occurred between the ages of forty and fifty years, 19 per cent. between thirty and forty years, and 18 per cent. between fifty and sixty years of age.

If we examine the admissions with respect to the ages, we find

946 patients, or above 25 per cent. were between the ages of thirty and forty years when admitted; 819 or 22 per cent. between twenty and thirty years of age; 718 or 21 per cent. were between forty and fifty years old; while 574 or 15 per cent. admitted were between the ages of fifty and sixty years. The years of greatest mental and physical activity are, therefore, as we should expect, the years which contribute the largest quota to the numbers of the insane.

The statistics showing the relation between age and recovery are somewhat imperfect, but so far as kept they tend to show that the greater number of recoveries are from among the young, and that age is an important factor in the prognosis of insanity, for, other things being equal, the younger person has the best chance of recovery.

In the matter of education, about 3.5 per cent. of those admitted have received a collegiate education; 14 per cent. have received academic education; 63 per cent. have been educated in the common schools. Less than 6 per cent. are reported as absolutely illiterate, having no education whatever.

These tables have not been carried further so as to ascertain the relative recovery- and death-rates among those possessing different degrees of education, but a report upon that subject from a series of observations by Dr. Hugh G. Stewart, of the Crichton Royal Institution, Dumfries, gives a smaller recovery-rate and a higher death-rate among those patients who have enjoyed the highest degree of mental culture, and the same seems to be true of brain workers generally in comparison with artisans.

Of the patients admitted, it appears that about 75 per cent. were suffering from their first attack of insanity; 12.5 per cent. from their second attack; about 4.5 per cent. from their third attack; while 3 per cent. had four or more attacks of insanity at the time of admission.

For the four years ending September 30, 1892, ninety-nine cases, or about 8.5 per cent. of those admitted, have previously been discharged recovered, from one to four times. These figures show the marked tendency to recurrence of the disorder, as well as the possibility of recovery, even after several attacks.

Concerning 1232 cases admitted since 1888, we find the following facts can be gleaned: 10½ per cent. of the women admitted are said to have inherited insanity from the paternal branch of their ances-

try, and 12½ per cent. from the maternal branch. Of the males, 10 per cent. inherited from the father, and 11 per cent. from the mother. Less than 2 per cent. inherited from both ancestors, and 8 per cent. from collateral branches. No hereditary tendencies existed in 57 per cent., and in 10 per cent. of the cases no information could be gained.

In the matter of occupation, it does not appear from the Middletown statistics that any particular occupation predisposes to insanity. To be sure, a large number of the women patients are put down as "housekeepers," and men as "laborers." But we know that in every community these occupations make up the majority of the population. We receive a good many farmers and farmer's wives, but not a number out of proportion to the numbers represented by these callings, and it is probable that overwork and scanty fare, combined with worry, would contribute an equal number of insane people from any other calling that made up so large a part of the population.

The average period of residence for each individual, if the calculations cover the entire period of the hospital's history, is 1.69 years; while the average period of residence of those remaining in the hospital September 30, 1892, is four years and one month.

The foregoing statistics are not comparative. They show simply the results obtained in certain directions at the Middletown State Homœopathic Hospital. And while the results obtained are highly satisfactory from a medical standpoint, a glance at the financial management will show a like satisfactory condition of things. Without going into details, it will suffice for any business man to know that the institution has been practically self-supporting. The managers keep within the income, and do not ask for appropriations for deficiencies in maintenance. This is very gratifying to us as Homœopathists, for it demonstrates the possibility of conducting great State and municipal hospitals under Homœopathic management in a manner satisfactory to the patients, their friends, and the public at large.

The charter of the Middletown State Homœopathic Hospital was granted by the Legislature of the State of New York, because the Homœopathists of that State wanted such an institution for their own use, and they demonstrated to the Legislature the fact that their numbers, wealth, and influence were such as to entitle them to what

they asked. That was true nineteen years ago, and the result has demonstrated the wisdom of the Legislature in acceding to this request of the Homœopathists, and establishing the institution they desired. Moreover, the example of the State of New York, and the result of the experiment at Middletown, has inspired similar action in other States, and it is to be hoped that still others will soon follow New York, Massachusetts, Minnesota, and California in their demand upon their respective Legislatures for State hospitals for the Homœopathic treatment of the insane of the Homœopathic faith. And here let me suggest that the thing to ask for is, not the privilege of having a Homœopathic physician or physicians allowed to practice in one of several State hospitals, but rather a hospital set apart and dedicated to the use of that portion of the citizens of the State who are Homœopathists. An institution for Homœopathists, in the interests of Homœopathists, managed and superintended by Homœopathists. Let the demand be made, and the appeal reiterated in unmistakable terms, backed by the combined Homœopathic influence of the entire State, brought to bear in the most available way, whether by political, social, or personal agency, and sooner or later the desired result will be attained. It will be better to wait and renew the appeal for exactly what, as Homœopathists, you want than to accept any compromise which fails in securing medical liberty and full justice to Homœopathy.

REPORT

OF THE

SECTION IN RHINOLOGY AND LARYNGOLOGY.

CHICAGO, ILL., June 3, 1893.

THE Section in Rhinology and Laryngology of the World's Congress of Homœopathic Physicians and Surgeons assembled in the Hall of Washington at 11 o'clock A.M.

In the absence of Horace F. Ivins, M.D., of Philadelphia, Pa., the Chairman of the Section, the meeting was presided over by Wesley A. Dunn, M.D., of Chicago, Ill., who read Chairman Ivins's address on "Recent Progress in Rhinology and Laryngology." The address was discussed by Drs. T. C. Duncan, of Chicago, and W. E. Green, of Little Rock, Ark.

The next paper read was on "Nasal Epithelioma," by Wesley A. Dunn, M.D., of Chicago. The paper described a case of the malady in a patient whom Dr. Dunn exhibited before the Section. The discussion of the subject was participated in by Drs. H. F. Ivins, of Philadelphia, Pa., and W. R. King, of Washington, D. C.

H. F. Fisher, M.D., of Nashville, Tenn., read an essay on "Malignant Growths in the Larynx." This paper was discussed by Dr. W. A. Dunn, of Chicago.

The following papers were presented by their titles:

"New Suggestions in the Treatment of Constrictions of the Œsophagus," by D. G. Woodvine, M.D., of Boston, Mass., with a discussion by Dr. W. R. King, of Washington, D. C.

"Massage in the Treatment of Nasal Stenosis," by William Dulany Thomas, M.D., of Baltimore, Md.

"The Treatment of Laryngeal Phthisis," by Charles E. Jones, M.D., of Albany, N. Y.

"The Treatment of Chronic Rhinitis by the Homœopath," by Charles E. Teets, M.D., of New York, N. Y., with a discussion by Dr. G. H. Quay, of East Cleveland, O.

"Nasal Surgery—Its Use and its Limitations," by Eugene L. Mann, M.D., St. Paul, Minn.

The sectional meeting then adjourned.

RECENT PROGRESS IN RHINOLOGY AND LARYNGOLOGY.

By Horace F. Ivins, M.D., Philadelphia, Pa., Chairman.

Mr. President, Ladies and Gentlemen.—As Chairman of the Section of Rhinology and Laryngology, it is my pleasant duty to pass in review some of the points marking the progress in these specialties within the past year or two. As it is, however, impossible to consider all of the advances made in this line, I take the liberty of indicating those which seem to me to offer the greatest advantage to us, in addition to which I have revived some points of sterling merit introduced years ago, but which have practically fallen into disuse.

Before proceeding with the various subjects, allow me to express my appreciation of the honor bestowed upon me in placing me at the head of this Section, and to return thanks to those who have been kind enough to respond to my request for essays; at the same time regretting that more of our foreign *confrères* have not responded in a practical way, although a number of them have been invited to do so.

Considering our subjects in the usual manner, I shall first take up those which belong to the nose, and proceed to the deeper tract, touching but lightly any of the sections; leaving to you the heavier task of dealing with the details.

Physiology of the Nose.—The division of the nasal cavities into respiratory and functional, so long taught, has had a drawback in the experiments of Kayser and Paulsen. They used Osmic acid on the heads of cadavers, having previously performed the powder-test upon them. The conclusions justified by these experiments are, that during inspiration, in a normal nose, the bulk of the air passes along the septum, above the inferior turbinated body, describing a semicircle in its course and extending upward nearly to the roof of the nose. (*Archives of Otology*, January 1, 1891.)

Epistaxis.—The origin of nasal hæmorrhage is now well fixed in a large majority of cases. While it was formerly believed that the bleeding-point might be situated anywhere in the nasal fossæ, it is at present certain that few cases originate in other than the anterior region (the vestibule), especially in the triangular cartilage at the entrance to Jacobson's organ. This origin gives much greater certainty of finding the bleeding-point speedily and of promptly arresting the hæmorrhage. The best means which recent research has brought to light are the application to the bleeding spot of Chromic acid or the cherry-red galvano-cautery point. The former method is far preferable, as it is less likely to be followed by return at a subsequent period. In fact, I have never seen a second hæmorrhage, from the same point, follow the careful application of the acid in a fresh, saturated solution. On the other hand, the cautery may destroy too much tissue, resulting in subsequent secondary bleeding. To the general statement that most hæmorrhages originate in the anterior portion of the nasal passages, one exception must be made, viz., that in atheroma, especially in very old persons, bleeding more frequently originates in the upper portion of the canals, and is general, not being confined to one or two points. The remedies applicable to such cases are generally Carbo veg., Crotalus, Lachesis, and Hamamelis. In younger persons I have found Bryonia almost unfailing. I am pleased to note one great advancement in the treatment of epistaxis, namely, that few physicians now recommend the use of such styptics as Perchloride of iron, for they often do considerable harm to the nasal passages, at times resulting in intense inflammation, abscess formation, and loss of the function of smell. Another long stride in the direction of reform consists in the almost uniform rejection of the cumbersome, painful, often dangerous posterior plug, and the substitution of the simpler and more scientific measures proposed by Dr. A. A. Philip (*The British Med. Jour.*, July 18, 1891) and by Dr. W. W. Parker (*Med. Record*, October 4, 1890). The former uses what he calls his "umbrella plug." A piece of silk, thin cotton, etc., is pushed into the naso-pharynx along the lower meatus by means of a smooth stick, pencil, or probe placed against the centre of the material used. When introduced, the edges and corners of the material will project from the nostril. The introducer is then withdrawn, and by it the top of the umbrella pouch is well filled with little pieces of cotton or lint. The introducer is

then firmly held against the cotton, and the umbrella corners pulled upon until the mass tightly fills the choana. The remainder of the pouch should then be packed, and the outer portion tied, bag-like, with a string. When it is desired to remove the plug, open the bag and pick out the cotton. Dr. Parker takes fifteen threads of patent lint or largest spool thread, three or four inches long, doubles them upon themselves, and ties a string six or eight inches long around the middle. By the aid of a probe, the centre of the threads is pushed along the floor of the canal to the posterior nares. The probe is then carefully removed and the nostril plugged.

Relation of Nasal Stenosis to Ear Defects.—Although this subject has frequently been dwelt upon during the past few years, it does not, in general, receive the attention which its importance deserves; this not so much with reference to the deafness as to the tinnitus aurium, that *bête noir* of the aural surgeon. Many aurists claim that at least 70 per cent. of all cases of catarrhal deafness are due to difficult nasal respiration, and that the cure of the latter means alleviation of the former, so far as it is possible to relieve; some even discard the Politzer bag and Eustachian catheter for other than diagnostic purposes, claiming that they do harm even when used with the greatest care. To this I cannot subscribe, as I have repeatedly seen marked and permanent relief from the use of middle-ear inflation, without relieving the considerable nasal obstruction; but when the latter is also accomplished, the results are vastly superior to those obtained without it. Especially is this true of tinnitus aurium, which, when dependent upon nasal stenosis (as occurs in about 50 per cent. of the cases in young subjects), is speedily relieved by reducing the obstruction.

Atrophic Rhinitis.—While internal remedies are the most essential features in the cure of this trying condition, it is possible to supplement their action by judicious local measures. Of these none, perhaps, has gained more prominence or met with better results than has Ichthyol. This is generally used in a 5 per cent. solution, in fluid cosmoline or albolene, and either applied directly to the part, after thorough cleansing, or sprayed into the nose several times a day. The cotton tampons introduced by Bottstein some years ago not proving thoroughly satisfactory, I made use of glycerine-coated cotton pledgets, which answer a better purpose in that they more

quickly excite a flow of mucus; the consequent dislodgment of the hardened crusts renders nasal respiration freer, relieves the pressure in the nasal region with its resultant headache, and at the same time reduces to a minimum the unpleasant odor. More recently others almost fill the nasal cavity with numerous, small, dry, cotton pledgets, thereby affecting the same result; but in my experience, acting more slowly and causing much more annoyance to the patient. Another method of treatment which has undoubted merit consists in the application of various powders, especially aristol and iatrol, to the lining membrane. The internal remedy which has recently been brought into special prominence is Theridion, so long applied by Dr. A. Korndœrfer, of Philadelphia, for the following symptoms: discharge yellow or greenish-yellow, thick and offensive, but particularly if the crusts be drawn into the throat and expectorated. Dr. Korndœrfer's chief symptoms are offensive discharge (either thick or thin), headache, and a feeling of fulness or pressure at the bridge of the nose. Hyoscyamus is highly recommended by Dr. Charles E. Teets, of New York, as one of the best remedies for the treatment of atrophic rhinitis.

Hay Fever.—I cannot pass this topic without saying one word about the fact that Naphthalin is constantly adding to its laurels in the cure of Pollen Catarrh, and that Gelsemium is gaining its proper place among the prophylactic remedies useful in combating this neurosis (?). It is pleasing to know that the wholesale destruction of sensitive areas is giving place to the more conservative method of reducing the actual obstructions to nasal respiration.

Nasal Neuroses.—Of these, neuralgia of the face and head and reflex conditions are now receiving the attention that has so long been denied them. In many cases the reduction of hypertrophies or pressure-tissue due to engorgement, has resulted in a speedy and complete cure of some of the most obstinate neuralgias of this region. In numerous instances relief has been obtained by the insufflation of finely powdered chloride of Sodium. In others it has been necessary to employ the galvano-cautery to reduce large, turgescent regions by making a slight incision into the engorged tissue.

Papillomata of the Nose.—One word will suffice with reference to these infrequent growths, which are always found directly within the vestibule upon the cartilaginous septum or lower turbinated body.

Some writers have, within a short time, endeavored to prove that these neoplasms occur very frequently; but caution is necessary to discriminate between the true papillomatous growth and a roughened, hypertrophic condition of the membrane, frequently found in this region.

Local Anæsthetics.—While cocaine still holds a large share of confidence in this capacity, there are cases in which it is unsafe to use it; therefore, great efforts have been made to replace or augment its action by some drug which will not be injurious to the patient. Of these, Antipyrin, 1 to 3 per cent. solution, has proven most satisfactory, in that it is not only anæsthetic but anti-spasmodic, and, when used in the nose, diminishes reflex cough and asthma due to nasal defects; above all, the drug is highly antiseptic. Its analgesic action lasts many hours, thus often making it more satisfactory than Cocaine. There seems to be but one disadvantage, viz., its application is more irritating than that of Cocaine.

Transillumination.—This important adjunct to the diagnosis of the diseases of the antra and ethmoidal sinuses has gone far to alleviate a class of maladies which has often rendered the surgeon inoperative in relieving obscure symptoms of this region. While transillumination does not clear up each case, it must be admitted that it has done much for this branch of rhinology; and Garel calls attention to a new sign—absence of luminous perception on one side by the patient himself. With a lamp in the mouth of a healthy subject, whose eyes are closed, a luminous impression is produced upon the lower part of the retina. In four cases of unilateral empyema of the antrum, Garel observed that this luminous perception was suppressed on the side containing pus. (*Annales des Maladies du Larynx, etc.*, February, 1893).

Fibroid Tumors of the Naso-Pharynx.—It is more than pleasing to note the yearly change which has taken place in the treatment of these growths of the naso-pharynx. The more conservative methods of electrolysis and galvano-cautery puncture have almost superseded the less rational, capital operations, such as those of Rougé and others, from which loss of life has been noted. Few cases now fail to respond to the more rational measures, thus giving a far better prognosis than was formerly possible. The cautery-loop has long been used, but occasional fatal results follow.

Physiology of the Tonsils.—Hodenpyl ("Alumni Prize Essay,"

College of Physicians and Surgeons, N. Y., May, 1890), formulates the following conclusions:

"1. The tonsils are lymphoid structures closely resembling Peyer's patches of the small intestine, consisting in general of a congeries of lymph nodules separated from one another by diffuse lymphoid tissue which is arranged about several of the hollow depressions of the epithelial lining of the glands.

"2. None of the theories thus far advanced to explain the functions of the tonsils are conclusive.

"3. The tonsils produce no physiological secretion.

"4. The tonsils are not absorbing organs. They neither absorb fluid nor solid particles from the mouth under ordinary conditions, nor do they take up foreign materials from the tissues in their immediate neighborhood.

"5. Tubercular tonsillitis is an uncommon affection.

"6. There is no evidence to show that pulmonary tuberculosis ever results from absorption of tubercle bacilli from the mouth through the tonsils.

"7. Rarefaction of the epithelium of the tonsils offers a ready explanation of the way in which the contagium of diphtheria may gain entrance to the general circulation in this disease."

This valuable thesis, therefore, sets aside many of the theories which have been prevalent for years, doing away with a source of supposed contamination, and places once more upon the broad field of doubt the function of these organs, the diseases of which give rise to such discomfort to the patient, and often result in serious consequences to the general health.

Tonsillitis.—Of late this subject has given rise to considerable discussion, and has even formed the title of a large monograph by Allard ("Les Amygdalites Aigues"), who believes that the causes of this disorder are microbiological, and that the hypotheses which regard tonsillitis as a general infectious disorder, the fever of which the angina is only a manifestation, are the most rational and the most in keeping with the majority of the facts, and it is now almost generally admitted that tonsillitis is often infectious, with resultant nephritis, orchitis, endocarditis, and arthritis. Cases of papular erythema and purpura complicating tonsillitis have been reported recently. In some cases, even a trace of albumin has been discovered in the urine, but as this is a condition which might possibly be

complicated by other and antecedent disorders, it can scarcely be looked upon as an actual symptom or sequel of amygdalitis. In the last few years, much attention has been drawn to the resemblance between follicular tonsillitis and diphtheria; many authors, in fact, failing to find a differential diagnosis; some even claiming that the usually milder affection is but a forerunner or even a modified form of the latter.

Hypertrophied Tonsils.—In passing, I wish to suggest one remedy for enlargement of the tonsils, which has not, so far, been spoken of by others, and which has proved, clinically, the most useful remedy tried; namely, Ignatia, 30x, with nodulated, slightly inflamed tonsils, especially in nervous persons, when the right tonsil is the worse, and with associated enlargement of the right anterior cervical glands.

Cancer of the Tonsils and Pharynx.—Although Arsenic, Hydrastis can., and Phytol. still hold high positions as therapeutic measures in the treatment of this fatal affliction, the recent employment of Calendula in a 20 per cent. solution, together with its internal administration in the 2x or 3x, has given a decided impetus to the internal administration of drugs in pharyngeal cancer, and Dr. H. C. French (*Pacific Coast Jour. of Hom.*, January, 1893) writes very flatteringly of the action of "a paste of red clover (Trifolium Americano) applied to an ulcer [epithelioma of the eyelid], and the same remedy taken internally, in doses of from two to five drops of the fluid administered three times daily, has, in the hands of the writer, proven both prophylactic and curative. The strength of the paste must be graded to the susceptibility of the patient by the addition of slippery elm powder. Under this treatment we have seen an ichorous discharge become bland or cease entirely, the rough edges become smooth, and the hard base softened." We welcome this new remedy for such a serious malady, and will place it alongside of the preceding drugs.

Guaiacum.—Dr. Wm. C. Goodno, of Philadelphia, says that, "in the ordinary form of pharyngitis, such as is so frequently developed after cold, it is nearly a specific remedy, much superior to Belladonna and other remedies which are generally administered." Acting upon this suggestion contained in *The Hahnemannian Monthly*, February, 1891, I have used the remedy very extensively in both acute and subacute pharyngitis, and am heartily in accord with the

doctor. The indications upon which I prescribe are partly empirical, but often, recently, certain appearances guide me in its administration, namely, the congestion, which is less bright than the Belladonna, and is on either side of the throat; the pharynx, at times, is slightly glazed, at others, infiltrated; much follicular involvement; and the patient complains of a smarting, especially burning, likening it to the effect of pepper. When given early and repeatedly, using the 2x or the 3x, it acts promptly, and in a large number of cases has cut short acute pharyngitis in patients who are accustomed to have long sieges from similar beginnings.

Diphtheria.—Some authors have disclaimed any marked contagiousness of diphtheria, unless the bacilli be of unusual virulence, a few writers even claiming absolute non-contagiousness of this malady. This seems like very bad teaching, especially should the laity be apt scholars. Dr. Bourges (*La Diphtherie*) studies the subject from the following standpoint: Diphtheria is a contagious disease due to the bacillus described by Klebs and later by Lœffler. He claims that the diagnosis between the false diphtheria of scarlatina and true diphtheria is always difficult, and often even impossible. In order to prevent the spread of diphtheria when there is a vesicular eruption (containing the diphtheria bacilli) on the udder of newly-calved milch cows, extreme measures should be instituted to prevent its spread by appointing dairy inspectors. When the condition is discovered, the sale of the milk should be prohibited, the udders thoroughly disinfected, and the wet, unsanitary condition of the cow-sheds speedily remedied. In the local treatment of diphtheria there seems to be a growing tendency to discard the harsher measures, substituting those which are less objectionable to the patient, and which can be applied without giving rise to so much resistance. Of the internal remedies, perhaps none has recently created so much discussion as Permanganate of potassium, introduced by Dr. I. W. Heysinger, of Philadelphia, about fifteen years ago; but which had practically been neglected until Dr. Heysinger's paper, upon the subject, appeared in the *Jour. of Oph., Otol. and Lar.*, January 1892. The doctor looks upon the remedy, when given in the earlier stages, as an infallible specific. He uses about one grain of the crystals in three ounces of pure water, giving one teaspoonful, together with mother tincture of Bell., every hour or so. He further employs the Permanganate as a prophylactic. Acting upon his sugges-

tions, a number of physicians have used it with very gratifying results.

Benign Ulceration of the Pharynx.—Besides establishing the identity of this condition, first described by Heryng, Masucci (*Revue de Laryngologie, d'Otologie et de Rhinologie*, October 15, 1891) has proved the existence of special bacteria, the streptococcus monophormus and variegatus, described by Heryng and Ludwig, demonstrating the benignity of the affection. The lesion is usually unilateral and single, oblong in shape, and apt to appear upon the soft palate. The ulcer is covered with a grayish membrane, which disappears in a few hours, leaving no trace. This form of ulceration has been too slightly dealt with by writers in general, and most practitioners look upon it as if of syphilitic or phthisical origin. It is, therefore, well to call especial attention to this transient, benign, and simple ulceration, that patients may not be relegated to either of the classes above-named.

Pyriform Sinuses and the New Tonsil.—Dobrowolski, of Warsaw (*Jour. of Lar., Rhi. and Otol.*) has presented a very important thesis bearing upon this subject, in which he states that in general the papillæ and mucous glands are not numerous in the sinuses. As to the follicles, the author regards the pyriform sinus in his cases (60) under four categories. In the first, and most numerous, (almost one-half) cases, there were no folliculi, only a circumscribed infiltration under the epithelium. In the second (less numerous), the adenoid tissue under the epithelium contained nodular agglomerations, similar to the tonsils. In the third class, the adenoid tissue was in the form of single sacciform glands, identical with those of the base of the tongue. Finally, in the last class (8 cases) these glands were agglomerated in the shape of the tonsils; thus leading him to the classification of a new (pyriform) tonsil, or as named by Dobrowolski, "tonsilla laryngea saccus—sinus pyriform saccus—fifth tonsil." This latter was present in six cases on both sides (generally at the bottom of the pyriform sinus) and was more or less of the size of a bean. The tonsil was composed of from 4 to 15 sacciform glands. The author regards the laryngeal tonsil as a normal, though not constant, organ similar to the lingual, pharyngeal, and faucial tonsils.

The Epiglottis.—Recently the theory that the epiglottis descended in such a way as to cover the upper portion of the larynx

during deglutition, has met with temporary rebuff in the new theory that it remains upright during the act of swallowing; closure of the sphincter serving to prevent the entrance of food. According to Michelson, this cartilage has a taste function on its posterior face, which, although long known, has not been proven experimentally until quite recently.

Functional Aphonia.—The chief advancement of recent years with reference to the treatment of this neurosis, consists in the cure by hypnotic suggestion. This method has been found very efficacious in numerous instances in which other, and approved, measures have been used in vain.

Contraction of the Transverse Arytenoid Muscle and Bilateral Paralysis of the Posterior Crico-Arytenoid Muscles.—Ruault and others have endeavored to clear up many cases of diagnosis of posterior crico-arytenoid paralysis by substituting that of contraction of the transverse arytenoid muscle. These two conditions are claimed, by various writers, to be one and the same, and Krishaber looked upon them as a unilateral spasm of the arytenoid muscle. Mackenzie, Seymour, and others admit, besides paralysis of the abductors, secondary contraction of the adductors; but there is a growing tendency to look upon the condition in many cases as "a primary contraction of the adductors with, in certain cases, a secondary myopathic paralysis of the abductors and atrophy of these muscles consecutive to their functional inertia." (*Jour. of Lar., Rhin, and Otol.*, August 1892.) Ruault (*Maladies du Nez et du Larynx*), in discussing abductor paralysis and adductor spasm, arrives at the conclusion that it is most probable that irritation of one recurrent nerve, such as is produced by slight compression, induces spasm, convulsions, or intermittent tonic contraction of the band, lasting for a short time, rarely more than a week; that these actions may disappear with their cause and recur and disappear, but if the pressure continue, it very rapidly determines a paralysis, limited at first to the dilator muscle; and if the pressure be from the first sufficiently severe, it determines sudden paralysis, either limited at first to the dilator or immediately generalized.

Laryngeal Phthisis.—While cocaine was far in advance of the older application, morphine, in relieving pain and enabling the patient to swallow comfortably, where this act was exceedingly painful, that which will, to a great extent, supersede both of the pre-

ceding, at the same time proving more or less curative, is the local use of Calendula as advised by Dr. A. C. Peterson, of San Francisco. He sprays into the larynx a watery solution of 1 to 20, or weaker, with the addition of two or three drops of carbolic acid to the ounce; but I have had better results from a Petroleum solution (calenduaol) as manufactured by Clapp and by Buffington.

Cysts of the Larynx.—Until very recently, cystic tumors of this organ were looked upon as exceedingly rare, but of late many cases have been reported. The causes of these cystic formations are various, viz., retention (Kantack), atrophy, excitation, and hæmorrhages. Schrötter believes that they are of the same origin as miliary vesicles, and many cases originate from neoplastic growths. It has long been taught that cystic tumors of the larynx, when once ruptured rarely refilled; but it is now well known that the contents may reaccumulate many times before complete destruction, thus leading to the treatment by cauterization or by evulsion of a large portion of the sac.

Intubation.—Although O'Dwyer's original idea seems to have been to use intubation for the purpose of relieving acute laryngeal stenosis, especially if caused by membranous deposits, the method has been carried much further, making it valuable not only to such cases, where it has a reputation equal to that of tracheotomy, to which it is vastly superior in many forms of chronic stenosis, especially when of a syphilitic character, or when complicated by the presence of benign growths. One of the objections to intubation has been a difficulty in introducing the tube, owing to its entrance into one of the ventricles of the larynx, thus preventing its passage through the glottis. To the inexperienced this has sometimes proved an insurmountable obstacle, but it can usually be overcome by rotation of the introducing handle from right to left, or *vice versa*, and the tilting of the tip of the instrument toward the opposite side of the larynx. O'Dwyer, in the *Annual of the Universal Medical Sciences* for 1892 (to which publication I am indebted for many valuable suggestions in the preparation of this review), says: "While I have often had the progress of the tube arrested by entering one of the ventricles, I never found any great difficulty in disengaging it by rotating the introducer, or otherwise changing the direction, until a few months ago, when I was called to the N. Y. Foundling Asylum to intubate an infant five months old, in which the resident physician had failed after many

trials. After four careful and prolonged attempts, I was about to give it up as useless, when it occurred to me that if the long diameter of the tube could be brought across the long diameter of the chink, either transversely or obliquely, the increased size in this direction would prevent it from engaging in the ventricle. This was accomplished by swinging the handle of the introducer well around in the left angle of the mouth, when the tube slipped in without difficulty. This impediment to intubation results from the entering portion of the tube being too small instead of too large, and the remedy consists in increasing the size of the distal extremity by making it cylindrical instead of oval, as at present constructed."

This manœuvre I have sometimes found necessary in intubating, and I believe that O'Dwyer's notice of it will not only render the operation easier but go far toward making possible the introduction of the tube in all cases. One word of warning is here necessary; if much force be exerted when the tube is in the ventricle, perforation will occur, and the tube be forced down between the cartilaginous and soft structures, not only thwarting the object of the intubation, but occasioning a greater amount of dyspnœa, even after the tube has been withdrawn. Maydl, of Vienna, has employed intubation as a means of obviating the entrance of fluid into the respiratory organs during operations. The tube is connected with a drain, to which is attached a funnel. The pharynx is then tamponed with iodoform gauze. Through the funnel the patient respires, and can be narcotized. He says that in this manner it is possible, in operations upon the mouth and pharynx, to prevent aspiration of blood and wound secretions, and even glottic spasms, without performing tracheotomy. The doctor has tried his method in several cases with good results, and it was further found that the apparatus could remain in position at least twenty hours without harm.

Phonetic Roll of the Trachea.—The causes of the great variety in the pitch of various voices, especially in singing, has been the occasion of many theories; some basing the difference upon the length of the trachea or the vocal bands, and the various resonant cavities of the throat, nose, and head, including the accessory sinuses. Dr. Moura, of Paris (*Jour. Lar., Rhin., and Otol.*, April, 1893), who made a series of experiments, claims that much depends upon the relative length of the trachea and vocal bands, and the relative diameter of the cricoid cartilage and trachea, together with the con-

stant change which the latter undergoes during vocalization, in that its diameter is altered according to the pitch of the tone. "The parallelism of anatomical development between the length of the ligamentary glottis and the diameter of the trachea, and the diameter of the cricoid is very often defective." Thus, in two similar subjects, whose vocal ligaments measured 9 mm., the diameter of the trachea was, in one 8 mm., and in the other 14 mm. The voice of the first cannot have the same tone as the latter. In one, the voice must be heightened, and in the other lowered. The inverse of this is seen in the vocal ligament of 2, 3, and 4 mm. longer than the calibre of the trachea; the influence of the tracheal wave is to raise the glottic tone.

Foreign Bodies in the Œsophagus.—B. Polikier, of Warsaw (*Revue Mensuele des Maladies de l'Enfance*, January, 1891), gives a very simple method for the extraction of some foreign bodies from the œsophagus. In two cases where the body could not be discovered, either by laryngoscopy or by the ordinary methods, by placing one finger in the space between the trachea and sterno-cleido-mastoid muscle on the right side, and pushing upward, he was able to find a little elevation below the cricoid cartilage. While with one hand he tickled the child's throat, he made an effort of massage with the other by pushing the body upward and backward, when in a few seconds the child, in each instance, vomited a coin. The conclusions which may be drawn are that, notwithstanding the deep position of the œsophagus, it is often possible to find a foreign body by external manipulation, thus making this simple method worthy of trial, rather than, as is usually done, force the body downward into the stomach, where it may occasion annoyance or even do considerable harm.

Discussion.

T. C. Duncan, M.D.: The subject of chronic enlargement of the tonsils is one that gives those who pay special attention to diseases of children a great deal of trouble. I have had the best of success. If we have an acute attack of tonsillitis, the recovery or subsidence of the chronic enlargement is very rapid.

In reference to hay fever: Some years ago I gathered all the literature of all the cases I possibly could upon this one disease. I think it is due to spinal irritation. The remedy that has been most successful in warding off the annual attack with me has been

Iodide of arsenic, beginning early in the summer and giving it once a day for two or three days and then skipping and commencing again. In these cases of development of hay fever it takes about five years until you get a fully developed attack with the nasal and asthmatic symptoms in full. I think it runs about fifteen years, and then the patient seems to get to that condition when it becomes less and less distressing every year. The greatest and best remedy, however, is a change of climate for these people who are run down and worn out. They are men engaged in active business and they need a rest, and the best place I know of to send them to is Lake Superior or Ashland or to points about there. The relief is almost immediate, and I think it is due to the uniform temperature that they meet with in that region.

In our Congress of Medical Climatology we had a report of a gentleman who was cured of nasal catarrh by a visit to old Mexico. I believe from the symptoms of his case that his trouble was at the nerve centers. The first thing he did when he got there was to take a bath, and then, up in that high altitude of 8000 feet, he was above all irritation, and the disease was arrested. Since his return he has not had a recurrence of the trouble.

W. E. Green, M.D.: I have cured a good many cases of hay fever by treating them for hypertrophy of the turbinated bones. The hay fever will disappear rapidly when you treat it thus. The application of the electro-cautery to the mucous membrane will destroy the high sensitive condition of the parts and cure your cases. My experience is that a large number of cases of hay fever are curable by simply removing the catarrhal condition that exists here. I find that almost every patient who is subject to acute attacks of cold in the head that gradually passes down into the lungs are relieved in that way. The disposition to take cold is removed by curing these catarrhal conditions that exist in a very large percentage of human beings.

NASAL EPITHELIOMA.

By Wesley A. Dunn, M.D., Chicago, Ill.

The advances made in nasal studies since the invention of the modern instruments of examination has made possible the diagnosis and successful treatment of many serious diseases that were formerly considered incurable. This is especially true of the malignant diseases of the nasal cavities, on the early diagnosis of which depends the treatment and prognosis.

The consideration and symptoms surrounding a case of epithelioma of the nasal cavity is not materially different from the same disease in other cavities if the early symptoms be not obscured by some acute trouble, as was the history of one of the cases I wish to report.

Mrs. Mary J. appeared at my clinic in April, 1892, and gave the following history: She was 50 years of age, colored, of strong physique, and had always been in good general health until March, 1891, when she suffered from an attack of la grippe, attended by symptoms of cold in the head and nasal stenosis and cough. This attack kept her in bed six weeks, and was followed by dropsy of the lower limbs for three months. During this time she suffered from great pains in the front part of the nose and head from time to time. In February, 1892, she observed a wart-like growth on the lower part of the right side of the nasal septum, with pain in and about the growth, extending into the side of her head. The growth increased rapidly, and caused a copious but not offensive discharge. The neighboring lymphatic glands were not involved. This growth was removed by some solution applied by her attending physician, but in a short time she observed a similar growth on the left side of the septum. This was treated by a snare and forceps, but without apparent success.

The disease rapidly increased, and about the first of April she applied at my clinic for treatment. For a month past the discharge

had been bloody and fœtid, with extreme pain in the nose, extending into the face and head.

Her general health was somewhat depressed, yet did not show an extreme degree of exhaustion. The appetite and digestion were good. No history of cancer or tuberculosis could be found, and no injury to the nose that she could remember. She said that a few weeks before, about the time the discharge became fœtid, she had pulled away a good-sized mass of tissue from the inside of her nose, which she described as looking like flesh. From that time the discharge was excoriating, bloody, and offensive. An examination showed the septum to be a mass of ulceration and decomposition. The mucous membrane of the septum was destroyed as far back as could be observed by anterior inspection. The cartilage had become destroyed and was crumbling away. The tissues of the turbinated bodies were swollen but not ulcerated. The ulceration did not include the fibro-cartilaginous band at the cutaneous surface of the septum, but extended high into the nasal cavities, and very far toward the posterior border of the septum.

A section of the diseased tissue was removed and referred to Prof. Howard N. Lyon, who submitted it to microscopical examination and pronounced it a typical epithelioma.

As treatment promised negative results, a radical operation was decided upon for the complete extirpation, if possible, of the malignant tissue.

The operation was performed April 19, 1892, by following Rouge's method of dissecting the lip and infra-nasal tissue from the maxillary bone, and drawing the face upward until the whole of the nasal cavity was exposed.

The growth did not involve the cutaneous rim of the septum; therefore, the cartilage and mucous membrane was removed from this portion of the skin, leaving an external septum dividing the opening. All the tissues of the nose were removed as far as the posterior nares, the septum, the middle and inferior turbinated bones, the maxillary crest, etc., until we felt perfectly satisfied that every vestige of the growth was removed.

The hæmorrhage was controlled by hot water and pressure from time to time, and was not extreme, yet considerable blood was lost. The face was restored to its normal position and sutured with catgut to the maxillary tissues. The cavity was packed with long strips

of gauze through the normal nasal openings. The patient reacted well, and no unfortunate symptoms appeared. The temperature was at no time above 100°, and she suffered but little pain.

The dressing was removed every second day, and the wound thoroughly disinfected. There was considerable depression of the external nose from want of support, and marked tendency to close up the external nasal openings by a granulation, which was avoided by inserting a small canula.

She was discharged May 4th, but still appears at the clinic from time to time to show us that she is in perfect health.

This case illustrates the possibility of sometimes saving the life of a patient in this serious disease by radical measures when the usual treatment would be of no avail.

I will refer to a second case equally as fortunate:

Mr. S. C. S., Iowa, applied to me for treatment in June, 1891, for an ulceration of the cutano-mucus margin of the septum. For a number of months past an ulceration had been gradually destroying the lower portion of the nasal septum, and had at this time involved about three-fourths of an inch of the anterior margin, extending into the upper lip and involving the tip of the nose. The end of the septum was wholly destroyed and broken away, being apparently worse on the left side.

The general health had been rapidly depressed to such a degree of exhaustion that the patient was overcome by the slightest exertion, fainting away from a slight examination, or from a short walk or effort of any kind. He had been formerly in good, robust health, having been a man of fine physique.

He said, that while he had never suffered an injury to the nose, that about six years before, an ulceration had occurred at this part of the septum, but which had healed after a few months, and that in April, 1890, he had observed a bloody discharge from the nose attended by scabs, but without odor. The scabs were quickly reformed after being exfoliated.

In January, 1891, he first observed actual ulceration to have taken place, which increased rapidly, and spread downward, until the middle of the outside of the nose was reached, attended by extremely excoriating and fœtid discharge, which grew more intense until he applied for treatment.

The pain was not severe, but the physical weakness and cachexia

were very marked. No glandular enlargement was found. There was no history of tuberculosis or other constitutional diseases, except in the grandmother on the father's side, who had died of cancer.

A specimen of the diseased tissue was examined microscopically by Professor Lyon, who pronounced it an epithelioma.

Believing that slighter deformity would follow treatment in this case by paste than by surgical means, I decided to remove it by the so-called paste treatment in preference to the knife, therefore I applied:

℞. Zincum chloridum, ... gr. xx.
Hydrastis. can., pulv., ... gr. xx.
Albumen (white of egg) q.s., ... S.

M.—To make paste.

This paste was applied twice daily for about a week, being held in place by adhesive plaster. At the end of this time, elm poultice was applied until the destroyed tissue came away.

Being impressed that the growth was not entirely removed, the paste was again applied for a few days, and afterward treated by poultice. When the tissue had all been removed, application of Mayer's ointment caused rapid healing of the wounded surface.

The advantage gained by this method of cure in this peculiar location was the great amount of tissue restored by granulation during the healing process; much more, I am sure, than would have followed an operation by the knife. The lip was completely restored; the end of the nose filled in until only a small notch was left at the tip of the nose and the lower end of the septum.

A photograph taken a few months ago shows but a moderate amount of deformity remaining. A recent letter informs me that for a year or so the nose was very tender, especially to cold air, but now it is quite hardy and of natural color. His general health has been perfect since the operation.

The treatment of epithelioma of the nose has not been very satisfactory, and but few cases have been reported as cured, and while I am not positive that these cases will not yet have recurrence, I do feel that the results already obtained have justified the operation. I believe it to be unwise to attempt anything other than radical treatment in such cases. I believe it is useless to attempt operation on malignant growths within the nose without opening the nasal cavity

and I believe that the method pursued in the first operation is the most practical and complete. It gives free and roomy space in the nasal cavity without danger of marring the contour of the face or of disfiguring the surface, and is practically devoid of danger.

I do not believe it possible to remove such growths with a snare or forceps with a degree of certainty necessary in such cases. The electro-cautery I believe to be insufficient and harmful in such cases, as so little tissue can be destroyed at a single sitting, and the application repeated so seldom, and the treatment followed by so much inflammation and proliferation of new tissue, that the treatment is dangerous and uncertain.

The treatment by paste, where it can be properly applied, is very satisfactory, because it is not so excessive as to produce violent inflammation, and is continuous in its action until the growth is removed. It is not applicable, however, to the majority of cases in the nose, because of their deep origin in the nasal cavities.

While I have been informed of many successful cases of malignant diseases cured by properly selected remedies, I have not had the courage to try medical treatment in such cases, knowing that such a short time would carry the case beyond the limit of operative interference, and fearing the power of remedies to restore the parts in so short a time and eliminate such destructive cell formation from the nose, I have resorted at once to the surgical treatment, and followed it by such constitutional remedies as seem indicated by the circumstances of the case.

Discussion.

H. F. Ivins, M.D.: Dr. Dunn is to be congratulated upon such happy results in the two cases reported, since nearly always little more than temporary relief is obtained, and not infrequently the fatal termination is apparently accelerated by radical measures.

In the first case, the progress of the disease was so extensive as to make it appear impossible to relieve by other than such treatment; yet it must not be forgotten that internal remedies have done nobly in many instances, and local treatment frequently deserves credit. The internal remedy which would seem most clearly indicated in the first case is Hydrastis can., although Ars. might have controlled most of the symptoms. As the doctor aptly remarks, however, delay was dangerous, and the results in the case up to the time of reporting could scarcely have been better from any mode of treatment.

My thoughts naturally turn to the internal and local use of Calendula in this form of cancer, as I have seen it act almost marvellously in some instances.

In this case it seems very evident that the snare and galvano-cautery were entirely out of place, and even the curette scarcely offered hope of more than temporary alleviation.

In the second case, I should have been led to a trial of Chininum ars. in 2x or 3x trituration. The unusually great amount of granulation tissue following the use of the paste, with the resultant slight deformity must have been gratifying alike to the operator and to the patient.

I would suggest that at a future time, viz., at the expiration of the three years' grace usually allowed for cancerous growths, the doctor make a final report of these cases.

W. R. King, M.D.: I don't know why I was selected to discuss this paper unless it was because I have seen so few cases. In my experience of twelve years I have seen but two cases of undoubted epithelioma of the nasal passage. One of these remained under my control for but a limited time, and I cannot say anything with reference to it. Dr. Dunn's paper has in it very little to discuss. It is a description of his method of treatment in two cases of epithelioma, but the description of his first case was very interesting to me. In that case, where the development of the growth was so great that it had penetrated to the deeper structures of the nasal cavities, it was evident that there was nothing else to be done to save the patient's life but the operation he performed. That the disease may return, is possible, of course; but that the woman's life has been prolonged, is a decided advance. The second case treated by myself was by the paste method. As I understand Dr. Dunn's case, the disease had not reached the deeper structures of the nasal cavity; so of course we would have less deformity and a better external nose.

I most heartily approve of the galvano-cautery. I believe it will be absolutely harmful in cases of malignant epithelioma of the nasal passages. The proliferation of tissue that follows the application, where it is done sufficiently frequently and thoroughly to remove the diseased mass, is a dangerous element, and you are apt to produce more active cell infiltration, and, of course, constitutional development with it. The possibility of curetting has been spoken of by the doctor. In the early stages of the disease we are not always looking for epithelioma where we have an inflammatory process in the internal passages; and it is often not until the later stages, and after the fœtid nature of the discharge becomes marked and the cachexia becomes apparent, that the diagnosis is made by means of the microscope, when it is usually too late, I think, to apply the curette or snare.

MALIGNANT GROWTHS IN THE LARYNX.

By H. F. Fisher, M.D., Nashville, Tenn.

These are comparatively rare, and the literature upon the subject so limited, that a report of every case is justified. Although the treatment in this case did not prevent death, it proved palliative, and being one of the few cases treated with Homœopathic remedies should be of interest to us. This, therefore, is the only apology I have to make for encroaching upon the time of this body.

Cancer of the Larynx was brought prominently before the public a few years since by the sufferings and death of General Grant, of America, and Emperor Frederick III., of Germany. These cases received a great deal of attention at the hands of skilled specialists in all countries.

These malignant growths are divided into two classes: Sarcomata and carcinomata (epitheliomata being classed with the latter), but it requires microscopic examination to determine the difference; and as the methods of treatment are essentially the same, the distinction for other than pathological research is unnecessary.

Statistics.—Fauvel found 7 sarcomata in 300 cases of laryngeal growths; Gurlt found 1 case of laryngeal sarcomata in 848 cases of this morbid growth in the body. Bosworth, on page 743 of his excellent work, states, "I find recorded in medical literature 47 cases of laryngeal sarcomata," and admits that in his extensive practice he has had only 1 case. Gurlt in 11,131 cases of carcinomatous growths found 63 in the larynx; Lebert found 3 cases in 9118; Baker found 3 in 500; and Winnerwarter 1 in 548 cases. Mackenzie, London's famous specialist, saw 53 cases of carcinoma of the larynx; hence, it is readily seen that carcinoma is nearly six times as frequent as sarcoma.

I present herewith a report of the case which came under my treatment for your consideration.

Case.—Rev. C——, æt. 52, presiding elder: Light hair and com-

plexion, blue eyes, 5 feet 5 inches in height, weight normally 130 now 122 pounds, consulted me September 18, 1890, for throat trouble, stating that he feared he would be compelled to leave the ministry on account of his voice failing. He had been examined by prominent specialists, in St. Louis, Fort Worth, and Waxahachie—two diagnosing laryngeal tuberculosis, and one chronic catarrhal laryngitis.

History.—My throat has been troubling me for nine months, at which time I found it difficult to preach my usual time, and after exertion, difficulty in breathing. Seven months ago, had *La Grippe*, since which the trouble has developed more rapidly; now, get out of breath easily; have to exert myself a great deal to preach; have a burning, sticking pain, as if caused by a splinter, extending from the throat to the right ear, when swallowing; hoarseness, voice fails me when preaching; cold air in the throat or on the neck produces cough; swallowing difficult; liquids especially go the wrong way and regurgitate through the nose; pain when swallowing like rubbing two rough surfaces together; at times, a little itching; hurting pain in throat ushers in a spell of coughing, terminating in vomiting which produces intense pain; voice rough and hoarse; cough a great deal, raising a frothy white or clear-starch like mucus; expectoration profuse; occasionally, quite nervous; when talking of delicate subjects, become almost uncontrollable; five years ago had a nervous attack in the pulpit, from which I am entirely recovered. General health always excellent; weight has diminished some recently in spite of good appetite; bowels regular, stool and urine normal; no particular thirst, nor desire for special articles of food; skin normal; cheerful temperament. Smoke three to five cigars a day; never use a pipe nor chew; do not use liquors or narcotics; am afraid it is, or will result in, cancer. No history of tuberculosis, syphilis, or cancer obtainable.

Examination of the nose reveals a chronic catarrhal condition; both inferior and middle turbinates hypertrophied, especially in the left nostril; slightly parted lips, indicating some mouth-breathing: tongue slightly coated white anteriorly, but heavily posteriorly; breath not offensive; gums normal; teeth in good condition; uvula elongated, pointed, and flat anteriorly; much congestion of a violet-red color in the pharynx and naso-larynx; pharynx very sensitive; laryngoscopic and rhinoscopic examination, completed under cocaine,

but even then, the gagging continued so that examination was not satisfactory; the following conditions, however, were noted: Larynx congested; vocal cords, especially the right, hyperæmic and soggy; glottis and epiglottis less mobile than normal; right ventricle congested, and apparently on a higher plane than the left; this congestion extending up the glottis and epiglottis; pain intense when gagging; vocal cords straight and smooth, having no gnawed appearance as in tuberculosis; temperature normal; pulse 76. The appearance of the pharynx, naso-pharynx, and larynx, resembled an acute exacerbation of chronic catarrhal laryngitis, and having recently been exposed, in damp, cool weather, sleeping in strange beds with inadequate covering, it was rather difficult to make a clear diagnosis. Bosworth, page 753, says: "There is nothing in the gross appearances of carcinoma, in its earlier stages, which renders it possible to make an absolute definite diagnosis.

It is to be borne in mind, that the disease consists essentially in cell infiltration, which burrows into surrounding parts." Expectoration of a clear-starch, lumpy character, which was raised with little effort, some ptyalism of a stringy, tenacious character. The burning sticking pain, extending into the ear was the most persistent symptom; no thirst nor restlessness; "sleep as calmly and peacefully as an infant." Face very slightly flushed, eyes bright, and pupils dilated slightly.

Treatment.—With this picture of the case before me, the first recipe was Belladonna and Kali bichr., two hours apart; cleansed the nasal cavities, pharynx, and larynx with spray solution.

℞. Sulpho-carbolate of soda, ... drachm i.
Aqua, ... quart i.
M. Sig.—Use two ounces as spray for cleansing.

After using this solution, applied oil; spray.

℞. Eucalyptol (Sanders), ... gtts. x.
Terebene, ... gtts. x.
Menthol, ... grains viii.
Albolene, ... ounce ii.
M. Sig.—Use after aqueous solution, q.s., to protect the parts.

Next day, against my earnest protest, he attended a camp-meeting, and got thoroughly chilled and wet while there. In spite of this he

reported better on the next visit, five days later. The burning, sticking pain was still troublesome, and the throat remaining decidedly congested, continued Belladonna and substituted Merc. biniodide 3x for Kali bichr.; used same sprays as before. Two days later he went to fill another appointment, and on September 27th I sent per mail Belladonna and Argentum met. 4x, the latter for the voice, which cracked easily. Eight days later he wrote for more medicine, complaining that the burning pain resembled that produced by red pepper.

℞. Belladonna and Capsicum; but on October 10th, on examination of the throat, again prescribed Belladonna and Argentum met., using spray as before. He stated: "Those little pills" (Belladonna) "give me more relief than anything else so far." On October 14th, having been exposed in cold, wet weather, and complaining of cold and rheumatism, gave Rhus tox. 3x, continuing this remedy until November 5th, with the addition of Kali bichromic. the first week for the expectoration and Argentum nitric. for the pain the remainder of the time. On this last date discontinued everything but Argentum nitric. and the sprays, he having reported that the cold and rheumatism had disappeared, and the burning, sticking pain was much relieved. November 22d he again reported improvement in the pain; said the expectoration had again become lumpy, clear-starch like, tenacious, irritating, and difficult to raise; no blood nor pus streaks in sputa; voice weaker. ℞. Naphthalin and Argentum met.

November 26th reports the cough no better; more hoarseness; great difficulty in talking; scraping in the throat, with the burning, sticking pain more prominent. ℞. Merc. jod. cum Kali jod. and Argentum nit. December 11th reports better, except the pain and general weakness. Up to this date he had lost thirteen pounds, although the appetite was good; continued Argentum nitric. He left next day for Corpus Christi to try change of climate, all the while using the Argentum nitricum four times daily. While in Corpus Christi he "lived on oysters, fish, and the best obtainable," gained three pounds the first two weeks, but lost four the remainder of his stay, returning home February 11, 1891. From this date I visited him at his residence almost daily until the middle of April. He looks fatigued, wearied, disheartened, and has abandoned all hope of recovery, refusing absolutely any operative interference. Is

very weak; voice almost lost; some dyspnœa upon exertion; drowsy; rests well and appetite good, but afraid to eat on account of the intense pain when swallowing; pharynx and larynx congested and angry looking; right side of epiglottis and glottis, right ventricle, and vocal cord congested, swollen, nodular, and nearly immobile; the point on the glottis beginning to ulcerate freely; the left side of the epiglottis and glottis infiltrated, smooth, bright red, the infiltration resembling œdema; no tendency to dyspnœa, except when exerting himself; cervical glands enlarged; larynx extremely sensitive to external pressure; profuse expectoration of greenish-yellow, pus-streaked saliva, with a fœtid, sweetish odor, difficult to raise. ℞. Stannum met., and Phosphorus, and

℞. Sodium biboratis (borax), ... drachm i.
Aqua, ... quart i.
M. Sig.—Spray larynx to cleanse thoroughly.

Then apply:

℞. Cocaine, ... grains x.
Aqua, ... ounce ii.
M. Sig.—Apply to larynx before eating.

This gave great comfort. Zinc sulphate, grs. ii.; Argen. nitric., grs. iv.; Carbolic acid, gtts. iii.; Sodium chloride, grs. v.; et aqua, oz. i., were more irritating than the above recipe for spraying; hence, continued its use. Continued Stannum and Phosphorus one week, then, on account of the livid color of the throat and slight nasal hæmorrhage, with constant picking at the nose, gave Arum triphil, one day. February 20th the recipe was Hepar sulphur and Kreosotum for the entire condition. February 23d, began local applications of Iodoform, after spraying first in Ether, which caused much irritation, and subsequently applying the powder with the brush directly to the parts. Afterwards used charcoal and sulphur triturated together, which seemed less irritating and more effective. These applications were continued until death relieved him. March 12th the recipe was Alumina, for very obstinate constipation, and Nitric acid for the pain. The latter seemed to aggravate. Argentum nitric. was substituted on the 14th, and continued until April 29th, he having gone from the city to attend to important business. April 29th, ℞. Hepar sulphur. He was now very weak; unable

to leave the bed; bowels loose, but controllable; voice lost; cancerous, cachectic look; skin dry, hot, harsh; face haggard; aged perceptibly and demise predicted early. Gave Aconite for fever, Natrum mur. for chilly sensation about 10.30 A.M., and Arsenicum. On May 18th, ℞. Digitalis and Ammonium for weakened heart action.

Result.—Death from exhaustion, May 21st, at 2.30 P.M.

Remarks.—My records do not show that Arsenicum was given before May 13th, but I am firmly under the impression that it was tried early and no record made. My impression is that it aggravated and was discontinued. However, if Arsenicum was not used, it should have been given a trial.

About February 15th he coughed up a piece of cotton-wood toothpick about three-sixteenths of an inch long. He and the family assert that he had not been using that kind of a toothpick for over a year, and he firmly believed it had something to do with his malady.

I do not ascribe the trouble to this cause, for upon microscopic examination the wood did not show any signs of having been imbedded in tissue, which would have been the case had it remained there for over a month. In March he had the sputa examined microscopically for tuberculosis, desiring to test the Koch treatment if tubercular bacilli were present. Careful examination by a competent microscopist gave negative results. This same gentleman was requested to examine a second time for carcinoma or sarcoma, but, being called away, failed to do so.

Owing to the unintentional oversight of a son, I failed to receive a message from my patient, stating that I could have his larynx after his death for examination; the message was delivered after corpse was dressed for burial, and in deference to the family gave up my fond hope of an examination of it post-mortem.

Diet.—Milk, buttermilk, cream, ice-cream, custards without sugar, raw eggs, oysters, broths, and easily digested foods were taken with relish; these articles were more easily swallowed if very cold; cracked ice was used to quench thirst.

Indications for the Remedies.

Aconite.—Face flushes up when rising from incumbent position; dryness in the mouth; thirst; burning, constriction in the larynx;

soft palate, uvula, fauces and pharynx dark-red; weak voice; skin hot, dry; face hot and flushed; feverish; pulse quick and hard. (Given only a few days before death).

Alumina.—Rectum inactive; soft stool requires much straining; stools hard, like sheep's dung; scanty; larynx more troublesome when constipated. (Relief after a few doses).

Ammonium Carb.—Accumulation of mucus in the larynx; great oppression in breathing; palpitation of the heart; feels as if dying; pulse small and quick. (Given with Digitalis to relieve the dyspnœa and stimulate the heart's action).

Argentum Met.—Neck stiff, swallowing difficult; sticky, tough saliva; viscid, gray, jelly-like mucus easily hawked up; throat feels raw and sore when coughing; hoarseness of professional speakers; a dull cutting, which becomes a stitch, causing fits of coughing; easy expectoration of white, thick mucus like boiled starch. (Used this remedy in the beginning and subsequently, but seemed to get no results).

Argentum Nitric.—Sickly appearance; white tongue; pytalism; tenacious mucus in the throat, causing hawking; soreness; sensation as if a splinter were lodged in the throat when swallowing or moving the neck; uvula and fauces dark-red; burning in the throat. (This remedy seemed to give most relief of the burning, sticking pain in the larynx).

Arsenicum.—Great emaciation; restlessness and anxiety; weakness and prostration.

Arum Triphil.—Congestion; soreness; dryness; burning pains and ulceration in the throat; constant picking of the nose. (Given one day only and with relief of the nasal symptoms).

Belladonna.—Eyes sparkling; pupils dilated; swallowing difficult; pain extending from the throat into the ear; congestion of the pharynx and larynx; pain in the throat comes and goes suddenly; great inclination to sleep; aggravation from draft of air and in changeable weather. (For a time gave considerable relief to the pain and other symptoms).

Capsicum.—Burning in the throat as if from red pepper.

Digitalis.—Heart's action feeble; irregular; pulse very slow.

Hepar Sulphur.—Sticking in the throat extending to the ear, worse on swallowing; sensation as if a splinter was in the throat; suppuration in the larynx; weakness of the larynx, cannot speak

aloud; cough caused by cold air in the throat. (This remedy, with Kreosotum, gave considerable relief to the pain and seemed to control suppuration to some extent).

Kali Bichromic.—Hoarseness; accumulation of tough, stringy mucus in the larynx; expectoration stringy; tissues in the throat dark-red and livid. (Loosens the mucus and assists expectoration).

Kreosotum.—Pale face; tongue coated white; putrid odor from the mouth; roughness of the throat; hoarseness; shortness of breath; sticking in the larynx. (Seemed to work in conjunction with Hepar to control pain and suppuration).

Mercurius Binoid.—Much phlegm in the throat; congestion of the tissues in the throat. (Always given in conjunction with Belladonna).

Mercurius Jod. Cum. Kali Jod.—For the cough that would not yield to Argentum met. (A failure).

Naphthalin.—For the clear, starch-like mucus difficult to raise. (This remedy acted well in freeing the mucus).

Nitric Acid.—Suspecting specific taint and for the burning, sticking pain; sallow complexion; purulent expectoration. (Aggravation caused by the 3x in water).

Phosphorus.—Expectoration of yellowish-white mucus, difficult to detach. Cough causing much pain; non-assimilation increased; salty saliva.

Rhus Tox.—Cold taken in damp, cold weather; rheumatism worse left side, "can predict storm several days ahead of time;" worse in bad weather.

Stannum Met.—Efforts to expel mucus in throat causes vomiting; hoarseness; ulceration in right side of throat; roughness in larynx; scraping cough with greenish-yellow expectoration; extreme weakness and prostration; must sit or lie down continually.

Discussion.

W. A. Dunn, M.D.: I have not treated a case of cancer of the larynx proper, but I had a case of epithelioma of the laryngo-pharynx situated on the posterior wall of the pharynx immediately behind the larynx. It was about the size of my thumb or larger, and oblong, perhaps an inch and a half. It extended from the base of the tongue when depressed to below the junction of the larynx with the œsophagus. The patient was an old lady and quite reduced. I undertook to remove the growth by the electro-cautery snare, and

removed it very successfully, apparently. The surface was perfectly smooth, and I sent her home. She came back in about two weeks, with the growth as big as ever, and I removed it again. It returned very slowly that time. I kept her in the hospital, and continued the cauterization every two or three days from time to time, usually twice a week, and succeeded in removing most of it. I do not remember the number of operations, but I thought once she would bleed to death. She had a hæmorrhage in the night, coming on about six hours after the cauterization. She rallied from it, however, and got along very well, but finally took la grippe very badly, and died. The results, as far as I went, were satisfactory, but what they would have been eventually I do not know.

A tailor in this city, a good friend of mine, was taking treatment by cautery. He suffered from a very profuse discharge, and had had nasal polypi and irritation in the nose for many years. I had removed the polypi and the hypertrophied tissue at the posterior end of the nasal passage, but the discharge continued. He had enlarged lingual tonsils. I operated on the left side with the electro-cautery, and it healed up nicely. Then I operated on the right side, hoping to relieve this continual irritation which gave him so much annoyance in his throat and nose. The right side did not heal up kindly. Afterwards a little projection, the size of a dime, that caught my eye, looked suspicious. His tongue had never shown any symptoms of malignant disease before. When he came in again I took a piece for the microscope, and had it examined by Prof. Lyon, and he at once pronounced it epithelioma. I consulted with Dr. George A. Hall, who was then alive, in regard to it, and he was of the same opinion. We immediately operated on him, Dr. Hall assisting me, and we removed the whole base of the tongue by an elliptical incision. We first performed tracheotomy, and with a pair of little curved uterine Emmett's knives, which curve in different directions, we were able to dissect, with the aid of that and my finger and the head mirror. We dissected out a mass about an inch and a half transversely and as far forward as the anterior third of the tongue. We were not able to see the growth with the mouth open and the tongue depressed, as it was so low on the tongue, but you could see it with the throat mirror. We did not operate with the laryngeal mirror, but by the sense of touch. When we pulled the tongue well out, under the influence of chloroform, we could get at it fairly well. With a curved needle we sewed the tongue with catgut and brought it together. It healed very kindly, and the man is very well and happy to-day, and comes in often to let me see it is not springing up. The operation was very difficult; for the tongue, you know, is very bad tissue for an epithelioma. He got into a controversy afterwards, in regard to his case, with one of the leading physicians in the city. He was the only member of his family that

was especially a friend of mine. The others worked upon him until they got him to consult this famous surgeon, who, in his brusque way, said, "You must have the tongue out." It scared the man nearly to death. He told me about it, and, of course, I didn't want to take the whole responsibility of the man's life, and we went to see Dr. Hall again, but he was just as positive that we were right.

About two months after that case I had another from the country, but he was too far gone; the whole tongue was involved. You could see it when the mouth was open, and see that it extended into the sides of the throat. I didn't want to undertake the operation because it had involved too much tissue. Another specialist advised the same way; so he went home and died a month afterward. It matters very little whether the growth be in the nose or larynx or tongue, it is always bad enough; but the result of these three successful cases convinces me that by careful and radical means we could save many cases that now die.

It has been a question in my mind whether the cauterization of that man's tongue did not produce the proliferation of epithelioma. I was afraid it did; so I have not cauterized a tongue since. There had been no such symptoms before this operation. I am afraid that the irritation of the cautery was the primary irritation that produced the proliferation of the epithelial cells; so that I want to caution you, and ask the advice of others in regard to this particular matter. I think we should investigate the matter, and report all such cases.

NEW SUGGESTIONS IN THE TREATMENT OF CONSTRICTION OF THE ŒSOPHAGUS.

By D. G. Woodvine, M.D., Boston, Mass.

I PROPOSE to speak of three forms of constriction of the œsophagus, viz., spasmodic, organic, and constriction from malignant disease of the passage.

The first variety belongs to the nervous, and is found most frequently among debilitated women whose nervous systems have been wrecked to a greater or less extent by the habits and customs of the present generation, or by having inherited a constitution without any vital stamina. The general appearance of the patients is pale, anæmic, nervous, having a poor appetite for proper food, or a capricious one for unnatural articles. This form of stricture is not wholly confined to women, but sometimes occurs among men. When it does occur among females it is more likely to be near the menopause. The constriction commences with a very slight difficulty in swallowing solids, accompanied with a sensation that something has lodged in the gullet, and necessitates the use of some kind of liquid to remove it. The difficulty develops more or less rapidly until there is a sense of dread at the thought of swallowing anything of a solid character. We have known persons afflicted with this complaint to spend nearly two hours in eating a meal. The result in such cases could be nothing less than extreme emaciation, or in other words, slow starvation. Under such circumstances the patient realizes that there is a necessity of getting relief in some way or other, and most naturally applies to her family physician to obtain relief. When, however, she is informed what is necessary to have done, in order to overcome the difficulty, she naturally shrinks from the operation of dilatation. The patient concludes to postpone the operation, hoping that the difficulty, if nervous, may after a while pass away. The expectation of the patient is however hardly ever realized in this regard; she is obliged sooner or later to submit to an operation. When this is successfully done she feels that she has

a new lease of life, until there are signs of its reappearance, which is most likely to occur. This state of affairs fills the mind of the patient with fear of choking and a dread of another operation. However being familiar with the relief received by the dilatation she does not shrink from the second as she did from the first; but has it repeated; this is, however, not so in all cases, for there are those that put it off until starvation stares them in the face, before they will submit.

The cause of this form of constriction, we believe to be a deficiency in the nerve supply to the muscle of the œsophagus at a particular point, which suggests some diseased condition of the base of the brain. The extent of this diseased condition determining whether it is a spasmodic or a permanent constriction.

The extent of time covering a spasmodic constriction according to recent authorities may be from a few moments to several hundred days.

The treatment of spasmodic stricture of the œsophagus requires the use of the cone or olive-shaped bougie. It is well always to begin the dilatation with the smallest size, and not to hurry the operation, when there is a decided resistance. We are well satisfied from experience that the presence of the bougie will sometimes occasion a decided spasm, either of the constricted parts or those in close proximity, which may continue for an indefinite period. The evidence of this possibility being in the fact, that the bougie may pass down comparatively easy; when the attempt to withdraw it is made, it can only be accomplished with great difficulty. In such cases patience is of the greatest importance in making a success of passing the bougie. It should be covered with some oleaginous substance like cosmoline or sweet oil. It is important that the operator shall have acquired such a sense of touch in the use of the probe that he may be able to recognize the condition of the parts as to readily determine the difference between the constriction and a pocket of mucous membrane. When the point of constriction is reached by the bougie and the resistance is decided, the pressure should be gentle at first, but increasingly firm, but not harsh, accompanied by a rotary movement of the bougie in the hands of the operator; and if the parts do not yield to a proper amount of pressure, the instrument should be removed, and the patient allowed to rest, and then after thoroughly anointing the bougie it may be again introduced and the pressure

applied as before. This operation may be repeated several times, or until the stricture is overcome, provided the condition of the patient will allow. Strictures of this class are not as difficult to overcome by means of bougies as those where the muscular tissues have become more permanently thickened, called organic.

The following remedies used internally, we have found useful in the treatment of spasmodic stricture of the œsophagus:

Belladonna is indicated by pressing pain, like contraction and a feeling as though a foreign body had lodged fast in the œsophagus; a feeling during deglutition that the throat is too narrow or drawn together too tightly for food to pass properly.

Gelsemium semp. has afforded relief in some cases of spasmodic constr'ction, where there seems to be great prostration of the nervous and muscular systems.

Hyoscyamus nig. is called for in that class of cases where the patient has a great deal of twitching of the muscles; spasmodic constriction of the œsophagus from a variety of causes; solid and warm food can be swallowed best; liquids cause spasms in the œsophagus, stop respiration and talking.

Hydrophobium is spoken of by some authorities as being indicated in periodical spasms of the œsophagus, with painful urging to swallow, but impossibility of doing it; abhorrence of fluids, especially water.

Phosphorus, stricture of the œsophagus, regurgitation of all food; food reaches the cardia and is immediately rejected.

Veratrum alb. is useful in spasmodic constriction of the œsophagus, resulting in paralysis of the tube.

The organic form of stricture is the more difficult to treat by means of the bougie or internal medication. The deposit of fibrinous material into the submucous and muscular tissues, followed by thickening and contraction of the muscular tissue gives rise to a condition of muscular resistance which sometimes is most difficult successfully to overcome. This the result of various causes which are not always understood, stare one in the face with a sort of defiance which is certainly very discouraging. It is a fact, however, that we have strictures occurring from mechanical causes, such as drinking hot water and corrosive substances. The treatment of what is denominated organic stricture of the oesophagus may be divided into general and local, or systemic and local. We find the general sys-

tem much depressed from want of food. The patient has become much emaciated, very much discouraged and hardly cares to make any further effort to live; in fact a release many times would be welcomed. The importance of getting nutrition into the system in such a manner as to give the patient strength as soon as possible cannot be over-estimated. If the patient is much reduced physically, injections of beef tea by the rectum should be given until she is sufficiently strong to bear the operation of dilatation with the hard rubber or ivory bougie. This operation, as before suggested in the treatment of spasmodic stricture, should be practiced in this case with even more care if possible than the other. We have found that it requires much patience and care to work the bougie through this form of stricture; but when it is accomplished there should be two or three larger sizes passed through at one sitting. In some cases of bad stricture there will be more or less of hæmorrhage from slight laceration of the tissues. When this is the case, the dilatation should not be pushed too far at one sitting. If any hæmorrhage occurs a Hamamelin suppository of appropriate size should be carried down into the partially dilated stricture and left there, which will soon melt and operate on the lacerated part as a local styptic. If the lacerated tissue does not give rise to hæmorrhage, there should be a Calendula suppository applied which will have a most beneficial effect. There can be no doubt that this new method of applying remedial agents directly to the diseased part where dilatation is necessary may prove of great value in the treatment of constriction of the œsophagus. After one, two or three days as the case may require, the operation of dilatation may be repeated, beginning again with the smallest size bougie and increasing the number and size until finally the passage is fully dilated, following each time of dilatation with the local application of medicine by means of the medicated suppositories as the case may require. In fact any remedy which the operator may desire may be applied locally in the form of a suppository.

The internal administration of remedial agents may be practiced as they may be indicated by the totality of the symptoms.

The malignant form of constriction is of the most serious character and the one in which we have less hope of doing anything to permanently relieve the patient. The treatment must necessarily be palliative. The dilatation must be cautiously carried on to a greater

or less extent, depending upon the progress that the disease has made upon the passage. In the primary stage of the development of cancer of the œsophagus it will be difficult to recognize the difference between it and organic stricture by the touch or by the amount of pressure of the bougie necessary to open the passage. In such a case we depend upon the character of the touch and the general appearance of the patient to decide. In such cases our success will depend much upon the judicious use of the bougie and the proper treatment immediately following, whether or not we give relief to the patient, prolong his existence, or by injury or perforation hasten a fatal termination. We suggest that immediately after the dilatation has been accomplished that a suppository of Hydrastis canadensis should be carried into the dilated stricture, and left to melt and flow down over the diseased part. Any other remedy that the physician may desire can be applied in the same manner. We believe that these local applications following so soon the use of the bougie will be likely to have a healing effect and thus prevent as rapid a degeneration of the tissues as would otherwise occur without their use. It will also leave the passage in a better condition for a subsequent dilatation. If the disease has progressed so far that the tissues have begun to soften and break down, the appropriateness of the local treatment will only appear the more reasonable.

As we have before stated, we do not undertake the treatment of these cases with any hope of permanent relief, but with the hope of making the patient more comfortable. The following remedies may aid us in thus doing:

Arsenicum album will be called for by the totality of the symptoms more than almost any other remedy during the progress of the disease. The characteristic symptoms which call for its use are excessive pains in the cardiac region of the stomach, extending up into the œsophagus, of a burning character, causing nausea. Great thirst for cold water and acidulated drinks, a small quantity of which satisfies. Vomiting of food soon after eating.

Hydrastis canadensis is indicated when there is a sense of great prostration and sinking at the epigastric region, with palpitation of the heart. Empty, gone feeling in the stomach. Acute, distressing pain in the region of the pit of the stomach.

Kreosotum for nausea and vomiting, with a painful sensation of tightness at the pit of the stomach. Painful, hard place in the region of the stomach.

Lycopodium, painful pressure in the pit of the stomach and lower part of the chest. Contraction and spasm of the stomach when breathing.

Phosphorus; the region of the stomach is painful to the touch. Painfulness of the stomach when walking. Violent pain in the stomach. Burning of the stomach, extending up into the throat.

A word in regard to the feeding of patients comes within the scope of this paper. We do not propose to refer to old methods of feeding, but to suggest a new one. Neither does the author propose to ignore any other method. We suggest that good tender beef or mutton be finely minced and slightly moistened, salted and frozen in appropriate moulds, with hollow centres, of proper size and form, and carried down by the same instrument that carries the suppository through the dilated stricture to the stomach, and there be dropped and the introducer removed. By this means something more than a liquid diet could be given until the patient would be able to swallow solid food himself. It might be well, after the dilatation is made, to carry a few beef-balls into the stomach before carrying down the medicated suppository to remain in the constricted portion. Of course this same method of introducing solid food into the stomach in other forms of stricture when necessary is equally as feasible.

The instrument above referred to, called the introducer, is a very simple invention of the author. It consists of a slightly tapering, left-hand screw, with a hollow shank, with a thread cut in it to correspond to the screw-thread on the whale-bone rod, upon which the bougies are introduced for the purpose of dilatation. When the dilatation is accomplished, the bougie is removed from the whale-bone rod, and the introducer screwed in its place.

The size of the introducer is as follows: whole length one inch and a half, length of shank half an inch, breadth of same one-quarter of an inch; length of coarse, left-handed screw one inch, and size of same one-eighth of an inch, and slightly tapering. It is made of metal and silver-plated.

The suppository is another invention of the author, and is designed to go with the introducer. It is nothing more or less than a rectal suppository made with a hollow centre of appropriate size to receive the screw, which is screwed into each one before the suppository is cold, and before it is removed from the mould. These are kept in a cold place until needed for use.

When medicated ice could be in any way serviceable in the treatment of disease of the œsophagus, medicated water might be put into the suppository-moulds and frozen, with the hollow centre for the introducer, and thus be passed down and up the gullet as many times as necessary, or be lodged at any point in the cardiac region of the stomach.

The operation of introduction is quite simple. The suppository is screwed on to the introducer, and the introducer is screwed on to the whale-bone rod, and carried down the œsophagus to the dilated portion near the cardiac orifice of the stomach, when the whale-bone rod is turned several turns to the right, when the suppository will be detached, and the introducer must be removed. If the stricture be located at the upper portion of the œsophagus, then the suppository should be carried down and up several times when a sufficient amount of the remedy will have been applied to the dilated portion.

It is self evident that a suppository could not be lodged very well at the upper portion of the œsophagus, without great inconvenience to the patient.

The writer has used these suppositories by means of the introducer herein described to a limited extent successfully; but the cases to which they are applicable occur so seldom in one's practice that it may take some time before the results could be definitely known. We therefore thought it best to publish the facts, and thus give to the profession an opportunity to test, criticise, or improve on the suggestions for the benefit of humanity.

Discussion.

William R. King, M.D.: I have seen not more than eight cases of œsophageal constriction of any variety in the past fifteen years. I have treated not more than four of these, and not to any extent whatever, by constant or continuous dilatation. Those that have been under my care were mainly those in the first division of Dr. Woodvine's paper, viz., spasmodic cases, and all these cases were women of decidedly nervous temperament. One of them I have never treated continuously, but have been called twice in consultation when she was seemingly choking from a particle of solid food tightly and spasmodically constricted in the œsophagus. In this case, after relief was obtained by inducing vomiting through the use of hypodermic injections of Apomorphin, the case was left in the hands of her family physician, from whom she has received strictly Homœopathic treatment—no local measures whatever except when

strangling—and her condition is improved decidedly; the attacks are much less frequent, and she enjoys more of the freedom of the table.

Another case, an elderly lady, suffered continuously from inability to swallow food. It would regurgitate and often stick fast in the œsophagus. She has been much relieved, though not cured, by a rather brief course of electricity applied along the œsophagus from above downwards and across the tube.

The third case is that of a lady just coming under my observation —a less severe case though quite annoying to her, she frequently having to reject morsels of food on account of sudden spasmodic constrictions of the œsophagus just below the upper orifice. She is very nervous and fidgety, with many symptoms of Zincum phosph., which remedy I have just placed her upon. What the result will be I cannot, of course, with accuracy say.

The fourth case was of organic stricture in a man, whether of malignant nature or not I cannot surely say, as he passed out of my hands before I could with certainty determine. In his case I resorted to the old form of graduated bougies for a time, with applications of the galvanic current through the gullet at the point of constriction, together with the indicated remedies, which included at different times Ars. alb., Tabacum, Phosph., Nux vom., etc. He improved somewhat, though so slowly that he probably became discouraged, as he passed from sight, and I have seen or heard nothing from him since.

After this confession of the extremely small amount of experience in this class of disease possessed by the subscriber, I will proceed to pass comment upon Dr. Woodvine's paper, with its new ideas and novel methods.

The division of the subject into three classes of constriction is a very natural one, and simplifies the handling of the subject. In the first class, viz., spasmodic constriction, we have almost invariably to deal with a so-called nervous individual. I doubt whether, in many cases, any organic cause for the constrictive spasms can be demonstrated; that is, any actual disease at the seat of the nerve centres from whence co-ordinate motion is controlled. I am equally unable to demonstrate the *absence* of such organic lesion, but I believe functional conditions, as, for instance, nerve anæmia, if I may call it so, might easily be a causative factor, as also might its opposite, viz., congestion of the central nerve seat or along its track. Except in the more aggravated cases, where absolute starvation or at least decided emaciation is progressing, I am inclined to be content with the Homœopathic remedy as I can find it indicated, abetted, perhaps, by the faradic current of electricity applied at intervals. If the cause is central, or at least away from the actual seat of constriction, it appears fair to suppose that remedies might prove more efficacious than local dilatation.

In the use of the improved cones or olive-shaped bougies described by Dr. Woodvine, I should dread very much the possibility of a severe constriction occurring after its passage; and this being then above the butt of the bougie, would make it extremely difficult of removal, perhaps even causing a separation of the whalebone screw-thread, leaving our bougie to drop down to the stomach beyond our reach. This may be an unnecessarily suspected bugaboo, but it would present itself more in such cases than where a fixed organic stricture occurs. There, care should be taken to avoid passing a cone too large to readily return. In the spasmodic case this cannot be done, as the extent of the sudden constriction cannot be anticipated.

The treatment by means of bougies is, of course, the rational treatment for organic constriction, especially when nutrition is gravely interfered with.

I contend that in such cases none but an experienced hand should officiate, especially in the inflammatory or malignant cases, owing to the ease with which serious damage may be done, aggravating the patient's discomfort and often shortening his life.

The novel method of applying locally the suitable remedy, as well as for inserting solid food balls by means of the so-called "introducer," is quite interesting, and I believe in the suitable cases will prove of great value. The instrument, from its description, seems a very ingenious one, and well adapted for its designed use.

In many cases, though I feel we can more readily and with more comfort to our patient apply our local remedy in liquid form, though of course in small quantities, where the constriction is high up in the œsophagus, I doubt whether the suppository would be any better borne than the liquid remedy; and when lower down I am more decidedly inclined to doubt it—of course admitting that the suppository is capable of holding the remedy in contact for a much longer period, if that should be a desideratum.

The most valuable feature of the instrument, to my mind, is the possibility, with it, of depositing solidified masses of meat, etc., beyond the point of constriction, thus fulfilling the requirements for free nourishment.

The author of this paper admits that he has used his introducer for applying suppositories, etc., to a limited extent only, owing to the fact that suitable cases occur but seldom in a single practice; therefore, much may yet be learned by trial and experimentation with this new method of treating this troublesome and distressing condition. To my mind, there is much that is practical and feasible in the method and instrument designed, therefore, as described in the paper.

MASSAGE IN THE TREATMENT OF NASAL STENOSIS.

By William Dulaney Thomas, M.D., Baltimore, Md.

A due appreciation of the importance and results of intra-nasal surgery, and the duty incumbent upon us as practitioners of medicine to render to our patients the most efficient service in the most efficient way, prompts me to say a few words in reference to the reduction of hypertrophied tissue in the nasal cavity and pharyngeal vault. The methods heretofore employed have been those of the snare; actual cautery, or chemical cauterization; and while useful, and in many cases necessary, they do not fill the requirements of all cases. There are many instances coming under our notice in which we realize the importance for a reduction of hypertrophied tissue, but do not think best to operate. In this very class of cases I have found a treatment, namely, massage, midway, as it were, between operation and cauterization to be of great advantage.

As a result of nasal stenosis, we necessarily have a turgescence of the vessels which supply the mucous tissue. Hyperæmia means increase of nutrition, loss of tonicity of the vascular walls, and thickening of the intra-venous structure, all of which, sooner or later, means true hypertrophy. Just at this stage does massage win its greatest laurels, although I believe it to be available in the later stages.

The effect of massage is to produce a stimulation of the capillaries, thus restoring in part the normal condition of the tissues. Clinically, as a result of this rejuvenation of the tissues, we find cataracts disappear, old ulcerations heal, neuralgia relieved or cured, stiffened joints made supple, and deposits and thickenings absorbed. That the effect of massage is to produce absorption, may be proved by the experiment of von Mosengeil. Mosengeil, taking a number of rabbits, injected into the knee-joints of each a solution of India-ink. At intervals massage was practiced upon the right knee, while the left remained untouched. After twenty-four hours the animals were killed, and the parts inspected. The left knee-joints were distended with fluid, while the right side, which had been

manipulated, showed an entire disappearance of the substance injected. The lymphatics on the right side, however, were filled with particles of India-ink, while the corresponding side revealed no such appearance. The evident conclusion is, that massage produced absorption.

Gerst, who has given the subject of massage considerable attention, reports a number of cases of naso-pharyngeal-catarrh, etc., which have been cured, and claims for the manipulation a decrease of redness and tumefaction of the mucous membrane, a disappearance of heat and pressure, and relief from the embarrassed respirations—a most important object to attain.

It is not my purpose to prolong this paper by the relation of cases treated by me, and the effects produced; it is sufficient for the present to say that, although my experience has not been as extensive as it might have been had I improved the opportunities presented, nevertheless I am sufficiently pleased to recommend it to the members of the Congress. At present the instrument used by me is a probe nine inches long, and three-sixteenths of an inch in diameter at the handle, tapering to a point one-sixteenth of an inch in diameter, which is surmounted by a bulb. The method of manipulation consists of a series of short, quick raps against the mucous membrane, aided by a slight rubbing movement. Sneezing at once occurs, and is to be prevented by pressure on the upper lip. Tolerance is, however, effected usually by the second or third sitting. One of the greatest difficulties standing in the way of the use of massage thus applied is the labor involved. The hand soon tires after two or three minutes, and the operator gives up in disgust. It has occurred to me, as well as to others, that an attachment could be readily made to the Garey vibrometer, by which these movements would be regular and graduated, and rendered much more effective. Such an attachment has been recommended to the vibrometer company, and they have seen fit to adopt it, with a promise of its early appearance.

What I claim for massage of the nose and throat is not a cure in all cases, but in that class of cases in which connective-tissue changes have not undergone great alterations, but where, as yet, there is hyperæmia of the parts, with consequent turgescence. I trust the importance of the subject will appear to you to be sufficient to induce further inquiry and investigation; if so, I shall have accomplished the purpose of this brief paper.

THE TREATMENT OF PHTHISIS.

By Charles E. Jones, M D., Albany, N. Y.

I know of no disease that is attended with more intense, constant and often intolerable suffering than the one, the treatment of which, is the subject of this paper. To palliate pain, to prevent a lingering death from starvation, and to save life from suffocation are the problems that often require all the surgical skill and medical acumen of the physician. As statistics prove that laryngeal phthisis is present in the majority of consumptives, cases more or less numerous will come to us all sooner or later. It is therefore most important that we have at command the means experience has demonstrated to be of value in the abatement of its manifestations or its possible cure. Heinze in his classical work on laryngeal phthisis published in 1879, in his third and final conclusion says, "a cure of laryngeal consumption will most probably never be made." Although since this was written the progress of fourteen years has introduced new methods and new remedies, but few cures have been reported, and some of these must be taken *sub judice* as sufficient time from the apparent recovery had not been allowed to provide for the occurrence of relapses. Others have undoubtedly been merely cases of follicular catarrhal laryngitis complicating pulmonary tuberculosis. Much may be done, however, in the way of prevention. Repeated laryngeal inflammations occurring in those of a strumous diathesis impair the vitality of the mucous membrane with consequent defective function. The capillary walls lose their elasticity, thus favoring stasis of the circulation. The products of inflammation, which in those of sound constitution are easily absorbed, in the scrofulous and debilitated form a nidus for the development of tubercle. A timely recognition of this predisposition followed by prompt and suitable treatment will often prevent tuberculosis. The progress of laryngeal phthisis may be divided into the following stages:

1. Stage of Anæmia.

2. Stage of Tumefaction.
3. Stage of Ulceration.
4. Necrosis or Caries of the Cartilages.

The second stage, as to form, may be regarded as hypertrophic or polypoid. The treatment should be both general and local. The constitutional treatment is necessarily the same as that of pulmonary consumption. Especially in those rare cases where the physical signs of lung invasion are wanting, and where the larynx seems to be the focus of the disease, too exclusive reliance on topical medication should be guarded against; for it is in these very cases that hygienic and general medical measures should be adopted with reference to the predisposing cause. If the *causa excitans* can be traced with a certainty, as is sometimes possible, the pursuance of the causal avocation should be interdicted. Of the general treatment I have but little to say, as it is still as varied and manifold as the theories of the ætiology of the disease were before the discovery of Koch. Now while the general treatment, as has already been said, is referable to that of consumption in its most extended sense, I would not be understood as limiting the therapeutics of the larynx to purely local medication; for fortunately we possess remedies whose specific power, when administered internally, seem to be exerted upon the larynx. The local treatment may be divided into palliative and curative. The office of the first is to alleviate pain, mitigate cough, diminish dysphagia, and calm the laryngeal dyspnœa. The second is employed in primary cases or cases in which the lungs are but slightly involved, and where the disease has not become so extensive as to banish all hope of success. The anæmic stage seldom presents itself for treatment; when it does the laryngeal membrane is livid, stained with dirty-looking spots and marked by the velvety projections which presage coming ulceration; I know of no better topical application than ten drops Liquor sodæ arsenitis to the ounce of water used as a spray. In a paper read by me before the New York State Homœopathic Medical Society in 1879 I advocated this treatment, and have had, as yet, no reason to abandon it. It is in this stage that I have used the Perchloride of iron (ten drops to the ounce), especially if the above named velvety projections are present, as recommended by Sir Morrel McKenzie.

Palliative Treatment.—One of the first symptoms met with is the hacking cough, which most patients quite definitely locate as rising

from the superior part of the larynx—what might be called an inter-arytenoideal cough. Laryngoscopic examination will usually disclose some tumefaction of the arytenoids, a swelling of the arytenoidean space, bathed with a secretion more or less rich in cellular elements. If there is a disposition to excessive secretion, a thorough cleansing of the part is essential. A simple spray of Carbonate of soda, five grains to the ounce, will answer quite as well as the Polypharmic solution of Dobell, though if the secretion is offensive, then the latter is better. This solution consists of

Acidi carbolici,	grains 8.
Soda biboraci,	grains 2.
Sodæ bicarb.,	grains 2.
Glycerinæ,	ounce 1.
Aquæ dest., ad. q. s.,	ounces 8.

M. et. ft. lot.

A favorite spray of mine, after cleansing, is Glycerinæ, ounce one-half; Aquæ dest., ounce one-half; Acidi tannici, grains 40; Acidi carbolici, grains 4; Tincture olei menthe pip., minims 3. For home use, Compound tincture of benzoin, a teaspoonful to a pint of water at 140°, in a Martingale inhaler, is of great service. Or two drachms of Succus coinum, with a pint of water, when the cough is very aggravating. Schmidt recommends steam inhalations—to a pint of hot water, Balsam of Peru, half an ounce; Alcohol, 2 drachms; but I believe whatever efficiency it may possess depends upon a Benzoic acid which the Balsam contains. The following is advised by Dr. E. L. Sherley: Creosote, 1 drachm; Compound tincture of benzoin, 4 drachms; Tincture of lupulin, 4 drachms—one drachm of this mixture to a pint of hot water. Creosote alone may be used as a spray. One and a half ounces of Creosote in the presence of one ounce of Glycerine, add to fifteen ounces of water. (English Beech-wood creosote, prepared by Morsen, is the best preparation.) The atomization of Glycerine by a Codman & Shurtleff atomizer will often prove serviceable. Sacubash speaks highly of inhalations of Pine-needle oil, two or three times a day, for the irritating cough. Oil made from the fresh needles is preferable. A Davidson's oil atomizer will serve well the purpose of administration. I have found a maceration of powdered Hydrastis root in Alboleme very serviceable in those cases characterized by a tough, gluey secretion. Lefferts has found Terebene, five to forty minims,

added to an ounce of water, in the presence of twenty grains of Magnesium carbonate, a teaspoonful mixed with a pint of water and inhaled at 140° for ten minutes night and morning, very useful in allaying the irritative cough. Eucalyptol, half a drachm to the ounce of Albolene, makes a useful spray. Solis-Cohen* recommends Ethyl iodide, ten minims, dropped on the sponge of a Yeo respirator and inhaled for an hour. Iodine has long been used to relieve the infiltration, but I have never observed that it exerted the slightest influence in checking the progress of the disease. Should its application be thought advisable, however, great care should be taken not to employ too concentrated solutions, for cases of œdema are on record which have been produced and proven fatal through its indiscreet employment.

With the advent of ulceration we have much graver conditions to meet. Since Horace Green recommended Nitrate of silver, of a strength varying from 20 to 60 per cent., no remedy in the entire range of topical application has excited more controversy than this agent. Although it is still used by a few laryngologists, the majority have consigned it to its proper place among "the things that were." Nitrate of silver does not penetrate sufficiently deep into the tissues. It has been experimentally proven that when a solid or saturated solution is applied to a denuded mucuous surface, it combines with the albumen and protein of the granular cells, forming a thin pellicle. Its action on the intact membrane is first a combination of a portion of the silver with the albumen, mucine and chlorides of the secretion; the remainder of the silver penetrates the epithelial interstices and is deposited as granules of Oxide of silver, which act as foreign bodies, giving rise to congestion and inflammation. When the ulcerations are superficial, and especially on the arytenoids, applications of Iodoform seem to have a retarding effect. But I think our best results from Iodoform are in those cases of combined syphilitic and tuberculous laryngitis. Schnitzler's excellent paper, read at the International Congress of 1890, has called attention to the comparative frequency of the coexistence of tuberculosis with syphilitic ulceration of the larynx. In these cases, Iodoform has an almost magical effect. I prefer the saturated ethereal solution diluted with twice the quantity of Almond oil sprayed through a Sas

* *N. Y. Med. Jour.*, March 6, 1886.

tube with about thirty pounds pressure. It is often used in powder, but my preference has long been in favor of the spray with this, as with other remedies, unless it be necessary to limit the extent of the medicament. I then prefer cotton on a laryngeal applicator. The insufflation of powders I have found badly borne by the tuberculous larynx, frequently causing cough, and suffocating attacks. On account of the objectionable odor of Iodoform I have tried both Iodol and Aristol, but have been disappointed in the results. Tymonsky* speaks well of a daily application of an 80 per cent. solution of Resorcin. I have had no experience with this remedy, but should regard its effects as similar to those of Carbolic acid. Since the introduction of Pyoktanin (Methyl-violet) as an antiseptic, Masini commends its use as a spray, fifteen drachms to eight ounces of water three times a day. He claims to have found it more useful than Iodoform menthol lactic acid. Sheinman† and Bresgen‡ apply it directly to the ulcers by means of heated probes dipped in the powder. From the unsatisfactory results obtained by myself with this remedy in syphilitic ulceration I have never been tempted to resort to it in tuberculous ulceration. Dr. H. F. Ivins§ makes favorable mention of a spray of a watery solution of Calendula "one to twenty or weaker," with the addition of two or three drops of Carbolic acid to the ounce, as recommended to him by Dr. A. C. Peterson, of San Francisco. I much prefer Calendnol, a preparation made by macerating under heat the marigold flowers in pure petroleum oil. From a very limited experience I think I may predicate good results from its employment. Among the more recently introduced drugs for the local treatment of this disease, menthol and lactic acid stand pre-eminent in the almost general recognition of their value. Menthol was first used by Rosenberg, in 1885, and since then he has presented several communications attesting its worth. He employed a 10 to 20 per cent. solution in oil, sprayed in the larynx once or twice a day. He claims that, in addition to its analgesic effect, it deterges the ulcers, which soon become of a healthy rose color, and are covered with healthy granulations, and healing in from four to six weeks. The tumefaction gradually diminishes under its influence.

* *Monatschrift fur Ohrenheilkunde*, May, 1891, No. 5, p. 153.

† *Berlin Klin. Wochenschrift*, August 18, 1890, No. 33.

‡ *Deutsche Med. Wochenschrift*, No. 4, 1890.

§ *Diseases of the Nose and Throat*, p. 432.

Goughenhein and Glover* propose the following: One part of menthol added to five parts of creosote and five parts of almond oil (mixed in a water-bath) to be painted on the ulcerated surface. A. B. Thasher† finds a 10 per cent. solution in liquid vaseline very useful in dysphagia. Solutions as highly concentrated as 40 per cent. have been used, but they are certainly objectionable on account of the intense irritation they cause. Of all the caustics employed in ulcerations of the larynx, lactic acid gives the most hope of successful result. To Krause, of Berlin, belongs the honor of using it for the first time. He was induced to try it through the experiments of Mosetig-Morhof with it in lupus of the skin. Since Krause read his paper before the Laryngological Subsection of the 59th meeting of German naturalists and physicians, many cases have been reported confirming its value. He commenced with a 10 per cent. solution, gradually increasing the strength to 50, 60, 80, or 100 per cent., as the patient becomes more tolerant of the acid. Under its influence, the deep-red tumefied parts become pale and shrivelled. With the stronger solutions firmly adherent eschars are produced, which, in falling off, leave a healthy-looking granular surface at the bottom of the ulcer. Krause has seen post-mortem evidence of the complete cicatrization of ulcers in a case dying of pulmonary consumption. It acts more promptly on soft than hard infiltrations. When the stronger solutions are used, parts should be anæstheized with a 4 per cent. solution of cocaine.

Krause used a brush, but the cotton-carrier is cleaner. The part should be thoroughly cleansed by an alkaline spray, and then it should be rubbed in by gentle pressure; when the milder solutions are employed, applications may be made every day, or every other day, *pro re nata*. To prevent the spasm of the larynx which sometimes occurs in the use of lactic acid, cocaine may be applied. Dr. Theodore Hering, of Warsaw, in certain cases, those in which there is considerable œdema with pronounced pyriform swellings of the arytenoids, advised sub-mucous injections of lactic acid. They would seem to be especially indicative in hard infiltrations and pseudo-polypoid growths. Hering employed a solution of 10 to 20 per cent., five minims being injected at each sitting. Dr. G. W. Magor‡

* *Jour. Laryngol. and Rhin.*, 1890, p. 365.

† *Cin. Lancet and Clinic*, June 22, 1889.

‡ *Canada Med. Surg. Jour.*, December, 1886.

pronounces strongly in favor of this method. This treatment does not preclude the intercurrent use of a mild lactic acid spray or other soothing measures.

Perhaps the most distressing symptom we are called upon to relieve is dysphagia. Before the discovery of cocaine, insufflations of morphia in starch powder, iodoform, or, preferably, gum acacia, from its adhesive qualities, were mainly relied upon for the relief of this symptom. I am commencing to think that far better results are obtained from morphine in painful deglutition than its more recent rival cocaine. The latter is too evanescent in its effects, and its necessarily repeated use seems to diminish its anæsthetic power. Goodhart* has reported a case where this happened. There are other objections to its continued use. The primary action of cocaine on the muscular fibres of vascular walls is spasmodic, followed by paresis, which, recovering very gradually, leads to diapedesis from the vessels and consequent increased catarrhal inflammation. Dr. Beebe, in an excellent paper, calls attention to the fact that cocaine increases the salivary as well as the mucous secretions. So, while temporarily relieving the odynphagia, it subsequently causes increased disposition to swallow on account of the augmented secretion. This action of cocaine is confirmed by a proving made by Dr. Percy Wilde, who gives these two symptoms following its local application "intense salivation and spasm of the abductor muscles." I think morphine combined with tannic acid and glycerine, and applied with the applicator, will give far more satisfactory and lasting results in painful deglutition than cocaine, whether used as a spray or painted on in oily solution. Sainte-Hilaire recommends a 30 per cent. solution of antipyrine as an æsthetic. Its effects last from one to two hours. Milder solutions have no effect. It causes some transient pain, however. Caffeine has been used as an analgesic, but it is only very slightly sedative, and is very uncertain. The acetamide of eugenol, made from cloves, has recently been found to possess anæsthetic power. It is an æsthetic as well, but is not caustic. It may possibly have a future.

In laryngeal, as well as pulmonary cases, a suitable and sufficient diet is necessary. Experience has shown that food of a semi-solid consistency is swallowed with less pain than in a liquid or solid form.

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* *Brit. Med. Jour.*, December 6, 1884, p. 1133.

Food should be taken with a gulp and not sipped. Egg swallowed *en bloc*, milk enriched with cream, and nutritious broth thickened with baked flour, rice flour, or oatmeal, raw oysters and custards, form the dietary to which the patient is often restricted. Dr. D. G. Woodvine* found this method very useful: "A small pitcher is placed upon the floor at the foot of a lounge; the patient procures a piece of rubber tubing eighteen inches long; he lies down with his feet over the arm of the lounge, his face and head extending over the foot, his left cheek toward the floor. He then places one end of the tubing in the pitcher, the other in his mouth, and by suction draws the fluid into the mouth, letting it flow along the inside of the cheek and the lower jaw until it reaches the œsophagus and then swallowed." This is a slight improvement of Wolfenden's method.† A patient of Dr. Woodvine's‡ discovered that the springing of the shoulders simultaneously with the swallowing would facilitate the act. With the occurrence of aphagia our only course is gavage and nutrient enemata. Bryson Delevan§ advised that a tube of small calibre, about the size of a large catheter, be introduced into the œsophagus just below the inferior constrictor of the pharynx. He devised a special apparatus for thus introducing the food. Owing to the size of the tube, great care should be exercised not to pass it into the larynx. I prefer a tube about half an inch in diameter. There are cases in which the tube will not be tolerated; nutrient enemata must then be given. The rectum should be thoroughly washed out preceding the enema. A few drops of tincture of opium added will often assist its retention. The following recipe of Morrel McKenzie makes a very nourishing injection. Cooked beef, mutton or chicken three ounces seven drachms; sweet-bread, one ounce seven drachms; fat, six drachms; brandy, two drachms; water, two ounces. "These ingredients mixed well together will make nine ounces. The meat, sweet-bread and fat must first be passed through a fine mincing machine and then rubbed up with water gradually added to make a very thick paste. It should be injected at a temperature of ninety-five degrees, and ought not to be administered more than twice in twenty-four hours." Feeding by rectum, however, should not be

* *Jour. of Opth., Oto. and Laryngol.*, vol. ii., 1890, p. 303.

† *Jour. of Laryngol. and Rhin.*, vol. i., p. 317.

‡ *Trans. Am. Med. Inst. Hom.*, 1885.

§ *Trans. Am. Laryngol. Asso.*, 1884, p. 81.

persisted in for a long time on account of the intolerance often produced, but should be alternated by attempts *per ora*.

The surgical treatment of laryngeal phthisis commenced with the introduction by Schmidt, of Frankfort, of puncturing and incising. To my mind this procedure only furnishes fresh foci for infection. Hering* observing that the deep ulcers were not reached in every part by Lactic acid advised curetting to be followed by cauterization with the acid. Krause afterward adopted the same treatment in selected cases. But from the reports I have read it seems to me that where there were good results they might fairly be attributed to the action of the acid, and curetting was superfluous. As to the use of the galvano-cautery I regard it as productive of much more harm than good. When laryngitis assumes a form, which in the earlier part of this paper has been designated as polypoid, that is, the formation of circumscribed tumors without ulceration, and in the papillomatous vegetations sometimes, though rarely, found in the tuberculous larynx, and when sessile, their destruction by the galvano-cautery is to be preferred to their evulsion by the cutting forceps, the only objection to this method being the repeated seances which its use requires. When pedunclated the removal by forceps is more desirable.

Tracheotomy, in my judgment, is only justifiable in threatened death from suffocation. Beverly Robinson† advises it as a directly curative measure!

"1. because it is certainly a palliative procedure of much value.

"2. It may ultimately be found a direct curative means yielding favorable results. To obtain these latter it seems indicated not to delay the operation to a late date." My objections to the operation, except in cases of apnœa, are, that the larynx does not receive the necessary amount of air, and mucous more readily accumulates. The dry cool air coming into almost immediate contact with the pulmonary surface is apt to cause complications. Again, the wound may become infected. The complete physiological rest which this operation is supposed to give I do not think is obtained. McKenzie‡ says, "during the last twenty years I have performed tracheotomy in a few cases of laryngeal phthisis perhaps, a dozen. Although it

* *Deutsche Med. Wochenschrift*, Leipsic, 1887, Bd. 13, p. 136.

† *Am. Jour. Med. Sciences*, 1879, p. 416.

‡ *Diseases of the Throat and Nose*, vol. i., p. 377.

has often relieved urgent dyspnœa, I cannot recall a single instance in which the operation delayed the pathological process. Far from giving rest to the larynx, the wearing of the canula, in my opinion, tends to irritate the windpipe." Resort has been had to intubation. F. E. Hopkins* reports a case. "The presence of the tube excited violent paroxysms of coughing, and was later expelled. The dyspnœa was relieved and the relief continued." This is explained by the force exerted in introducing the tube; it tore away a portion of the posterior commissural thickening, and doubtless the remainder subsided somewhat from contraction and relief to the engorgement from bleeding. Dr. Massei† reports three cases relieved by this operation.

Therapeutics.—The dominant school of medicine place but little reliance on the internal administration of medicine with distinctive reference to their special action upon the air passage, but largely limit their internal treatment to the general dyscrasia, and to local applications. So, it is to Homœopathic literature that we are obliged to seek for this means of encountering the pathological conditions in question.

Arsenic, as mentioned before, is indicated where the laryngeal membrane is anæmic, stained with dirty-looking spots, and marked by the velvety projections which presage coming ulceration. Cough is absent or entirely out of proportion to the progressive emaciation. Accompanying the objective signs is a peculiar sensation of burning, which is referred to the region of the cricoid and thyroid cartilages. The same remedy is also serviceable in a later stage, when extensive ulceration has taken place and an indolent and acrid sero-purulent discharge comes from the ulcers. I formerly used Arsenicum album, but of late years have preferred the second trituration. The late Dr. Nichol in a study of this sort commends it highly in throat consumption. Dr. Beebe reports three cases greatly benefited by its use.

Aurum Iodatum 3*x*.—Meyerhofer has found it useful "in torpid ulcerations of the larynx."

Drosera.—Is nearly always useful for the spasmodic cough of the early stages. I agree with Jousset in giving material doses of 15 to 20 drops of the tincture three times a day.

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* *N. Y. Med. Jour.*, 1892, p. 234.

† *Jour. Laryngol.* and *Rhin. Jour.*, July, 1891, p. 265.

Kali Bichrom is only useful in the follicular catarrh with mucopurulent, stringy expectoration which often precedes the development of tubercle.

Hepar Sulphur.—The posterior wall of the larynx is abundantly supplied with racemose glands, from this fact suppurating ulcerations in this portion of the larynx are quite frequent and especially indicate the use of this classical drug.

Phosphorus.—Often indicated in irritative cough which seems to arise from the posterior commissure.

Seleniate of Soda.—In my paper on "Laryngeal Phthisis," to which allusion has been made, favorable notice was given to this salt of Selenium, but since then I have not found it at all satisfactory. The following is an extract of a letter written to Dr. Ivins* by Meyerhofer in 1889: "In my work you will find (page 48, par. 148) a case of recovery of phthisis laryngis under the influence of the seleniate. Since then this salt, though useful in many other respects, has disappointed me in this disease. Many other remedies are prescribed, but their sphere is mainly found in the concomitant lung diseases."

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* *Diseases of the Throat and Nose*, p. 436.

THE TREATMENT OF CHRONIC RHINITIS BY THE HOMŒOPATH.

By Charles E. Teets, M.D., New York, N. Y.

In this paper I will treat of two forms of chronic catarrh—those in which there exist permanent hypertrophies; and those which are characterized by intermittent swellings of the Schneiderian mucous membrane.

These two forms are the most frequent of all varieties of chronic rhinitis.

In the treatment of chronic catarrh, where there exist obstructions of any kind, the first step to be taken is, to remove these obstructions; then, with Homœopathic remedies, we may expect favorable results. These results we would not obtain without this preliminary treatment.

I know that objections have been made by some Homœopathic physicians to such a course; they claiming, that unfavorable results follow operative treatment.

These objections, however, come from those who have had very little experience, but who, on the other hand, are always heavily loaded with theories. The large practical experience which I have had, warrants me in saying that these objections are *unfounded*. I shall prove, on the contrary, that only the most favorable results follow operative procedures when performed in a proper and skillful manner.

It has been said that, where such line of treatment is followed, it does not differ from that used by Old-School specialists; and, moreover, that it makes very little difference, whether a patient is operated upon by an Old-School or a Homœopathic specialist.

I shall have to take exception to this; because the two have different objects in view; and their respective operative procedures are entirely different.

In the first place, the Old-School specialist uses operative meas-

ures as a *last* resort, and expects such measures will *complete* the cure. This, it too often, does *not do*. The Homœopathic specialist, on the other hand, resorts to operative measures for the purpose of *paving the way* to future treatment, which must be in part Homœopathic—to effect a permanent cure.

In the second place, Old-School specialists, as a general thing, remove as much tissue from the nose as possible, leaving the cavities spacious, and, often, too much so. The Homœopathic specialist, on the other hand, removes as little tissue as possible, and yet quite enough to produce the desired result—which is, to prepare the case for future treatment.

Having differentiated thus between the Old-School and the Homœopathic specialist, I shall next endeavor to meet the objections made to operative treatment, by adducing *facts* instead of *theories*.

It is claimed that the removal of bone, cartilage and mucous membrane, from the nasal cavities, is followed, in time, by their becoming abnormally large, and frequently results in atrophic catarrh.

To the first objection, I will say that it has been proved to be groundless. I have not one, out of the large number of cases upon which I have operated, that presented results claimed above, after the operation. In fact, in two cases to which I wish to call special attention, the operation produced effects just the opposite. Instead of shrinkage of the parts, there was an increase of tissue, and a consequent narrowing of the nasal cavity.

Miss M. came to me, complaining of an obstruction in the left nasal cavity. On examination, I discovered that the septum was slightly deflected to the left, while along the cartilaginous portion there was a horizontal ridge, which completely obstructed the left side. The latter was removed and the septum planed off, leaving the cavity large enough to pass a wooden plug one-quarter inch wide and one-half inch high. This was kept in position for six days—removing it every other day for antiseptic cleansing of the parts. Three months afterwards, I found the nasal cavity in almost as bad condition as before the operation was performed. A second operation was resorted to. After this, I kept the patient under observation, seeing her two or three times a week. At the end of six weeks, I could see that the cavity was gradually filling up, and that something must be done to arrest the overgrowth of tissue. I then had recourse to the galvanic cautery, using a flat electrode. This was

effectual, not only in removing some of the redundant tissue, but also in arresting the further progress of the growth. I will not tax your patience with a description of the second case, as it was similar to the one just cited, and was treated in the same manner, with good results.

In reply to the *second* objection—that operations on the nasal cavities are frequently followed by atrophic catarrh, I would say, that it is without any foundation whatever. In twenty-five cases, which I have had the opportunity of keeping under observation, and which I examined eighteen and thirty months after the operation, not one presented any evidence of dryness of the parts operated upon, or of atrophic catarrh. In fact, it would have been impossible for any one but the operator, to have discovered what portion of the septum had been operated upon, as the mucous membrane had been reproduced, to all appearance in its original and normal condition. I believe, that all who have had any wide experience in operations upon the nasal cavities, will agree, that only good can result from a properly performed operation.

The failure to obtain good results from operations of this character is due, in most instances, to *neglected after-treatment.* Hence its supreme importance. It must be frequent and long-continued.

I am decidedly in favor of conservative surgical procedures in cases of chronic catarrh; but there are only three classes of cases in which I would consider it necessary to use operative measures: First, those in which obstructions prevent proper drainage of the nasal cavities; second, those in which the passages are so narrow that the least irritation, whether the result of atmospheric changes, particles of dust or irritating vapors, causing swelling of the parts, and producing contact of the external and internal walls. If left alone, this would result in adhesion of the parts. Third, those in which adhesion of the external and internal walls has already taken place, and to which Browne has given the name of Synostosis.

It is not necessary that every spur and ridge upon the septum should be removed; nor is it necessary that the septum should be perfectly smooth. It is not good surgery, to hold that every departure from the right line in the position of the septum demands treatment. And here is where a great many inexperienced operators make their mistake. It is the neglect of not paying particular attention to what is proper and necessary to be removed that justly brings

specialism into disrepute. It is desirable, also, to operate by artificial light reflected from the forehead-mirror; but in that case the operator must be familiar with the use of the head-mirror, and be able instantly and automatically to follow any motion of the patient's head with the directed illumination during the few minutes consumed by the operation. Antiseptic cleansing of the parts before operating and during healing is desirable. The nasal cavities having been cleansed, the parts should be thoroughly anæsthetized, so that all pain may be avoided. This is best accomplished by saturating a strip of lintine, about half an inch wide, with a 10 to 20 per cent. solution of Cocaine. This is passed into the side to be operated upon by means of a flat applicator, and made to cover the tissue to be removed. Satisfied that all sensibility has been destroyed, we should perform the operation with as little inconvenience to the patient as possible, selecting those instruments which will give the least disturbance to the patient, consistent with the best attainable results. The nasal saw, snare, trephine, drill, chisel and gouge, together with various other accessories, have each their proper place in the domain of nasal surgery.

Having finished the operation, the next important part is the *after-treatment.* The results will depend largely upon the attention paid to it.

The conditions present in the nasal cavities will not allow of an antiseptic dressing that may be left there for three or four days, as may be done in other parts of the body; but the healing process must go on in the presence of septic surroundings. In consequence of this, the patient should be seen and treated every other day for two weeks; afterwards, twice a week, until the healing process is completed. During the first week after the operation I would advise insufflation of powdered Europhen. In the second week, and until the parts are completely healed, liquid Petroleum, to which has been added Calendula and Eucalyptol. By means of an atomizer they are easily brought into contact with the membrane of the nasal cavities, and are not only soothing to the mucous surface, but also protect the membrane from atmospheric influences. During the first week, Arnica may be employed with good results, unless some other remedy is plainly indicated.

There are so many medicines that can be used locally in chronic catarrh that it would consume too much time even to enumerate them.

A few only, and the most important, may be mentioned: Menthol, Eucalyptol, Calendula, Tar, Thuja, Carbolic acid, Aceto-tartrate of aluminum. By various means, liquid Petroleum will take into solution the drugs mentioned and act as a better medium than water, with the exception of the Aluminum-aceto-tartrate, which should be used in an aqueous solution.

Some specialists have been quoted as using Menthol with Petroleum in the proportion of sixty grains to the ounce, and oil of Eucalyptus, one drachm to the ounce. This proportion I consider far too strong, as it is not only painful but irritating to the membrane. Menthol should not be used in a proportion to exceed ten grains to the ounce, and sometimes five grains will suffice.

Menthol is indicated in painful inflammatory affections, and where there is frequent erection of the mucous membrane, especially of that covering the turbinated bodies.

Eucalyptol (Sanders) should not be used stronger than half a drachm to the ounce, and, in some cases, ten drops are sufficient. It is indicated in inflammatory swellings of the mucous membrane, accompanied by excessive secretions.

Thuja, combined with Petroleum, has not been mentioned by Old-School specialists, yet it is one of the best local remedies we have. It is useful after operations to assist the healing process, and is also indicated where there is a discharge of offensive purulent mucus and ulceration and scabs in the nostril. It has also given satisfactory results, when not too strong, in dry coryza.

The Aceto-tartrate of aluminum may be used either in solution, in the proportion of one drachm to the ounce, or in combination with Boric acid; equal parts. It has styptic and antiseptic qualities, and is, therefore, used chiefly to arrest hæmorrhage after operations and for its antiseptic qualities. It is, however, also useful in hypertrophic rhinitis, a rapid subsidence of the swelling being brought about by insufflations of this drug with Boric acid; equal parts, or one to two.

Hypertrophy of the mucous membrane, covering the turbinated bodies, may be reduced either by the galvano-cautery or some strong acid. I know of no acid that answers the purpose so well as the Trichloracetic. It has an advantage over all other acids of which I have any knowledge. The pain produced by the cauterization is insignificant; the eschar which is formed is uniformly thick, is

almost inodorous, produces no unsatisfactory action, and leaves no unpleasant after-effects. Immediately after the application of the acid a bright ivory-white scab is formed, which remains localized to the point of application. This latter quality is of great advantage, as it does not spread to other parts, as do many deliquescent caustics; for instance, Chromic acid.

Special attention should be paid to keeping spray tubes and instruments clean, for back of the unclean instrument is an unclean and careless operator.

Having journeyed thus far with the Old-School specialist, operating possibly in the same manner and with the same kind of instruments, yet with different objects in view, come we to the place where we must part company.

The Old-School specialist, having finished the operation, and the healing process being completed, if the case is not entirely cured, has nothing else to resort to but local remedies. These, too often, fail to complete the cure.

On the other hand, the Homœopathic specialist, having prepared his case for future Homœopathic treatment, looks forward with confidence, knowing that he has a host of remedies which, if carefully selected and applied according to the principle of *similia similibus curantur*, will effect a permanent cure.

There is no branch of medicine in which greater laurels could be won for Homœopathy, if we were not too conservative, than in this branch of *rhinology*.

After the obstructions have been removed, the remedies that will be found to give the best results are as follows:

Belladonna.—Throbbing headache; worse from motion and leaning forward; tip of the nose red, with burning in the nose; discharge of mucus mixed with blood. Especially useful in the first and second week after operation.

Kali Bichromicum.—Frontal headache; formation of hard plugs in the nostrils; dryness of the nose, with a feeling of pressure at the root of the nose; tenacious, ropy discharge from the posterior nares, adhering to the pharynx and removed with difficulty.

Kali Iodatum.—Acts similarly to Kali bichromicum, except that the Kali iodatum patient has more hypertrophy of the mucous membrane of the nose; the throat is dry; the glands enlarged, or presenting some evidence of scrofulous or syphilitic taint.

Lobelia Cerulea.—Great depression of spirits; pain in the left side of the head and over the root of the nose; first, itching and tingling feeling in the left nostril, followed by frequent sneezing, with copious discharge of thick mucus from both nostrils; nostrils very sensitive, so that inhalation of air creates a slightly painful feeling. This remedy is especially adapted to such cases as are subject to catarrhal inflammation of the posterior nares and fauces, and in which there appear upon the posterior and lateral walls of the pharynx red elevated spots.

Passiflora Incarnata.—Distressing pain at the root of the nose; complete stoppage of one or both nostrils; discharge slight and thick; restless sleep.

Paris Quadrifolia.—Pain in the right temporal region, extending to the frontal sinus and root of the nose; discharge of red or greenish mucus on blowing the nose; stuffed condition and fulness at the root of the nose; constant hawking of tenacious mucus; fauces dry in the morning.

Hyoscyamus.—Buzzing and singing in the ears; sense of smell weak; jerking pain at the root of the nose; mucous membrane of the nose dry; this remedy is given by the Old-School when the secretions are excessive, and there is much restlessness—a few drops of the tincture being given; when the secretions are suppressed, especially after operations, it will give good results when given in the 3d or 6th potency.

Spigelia.—Pain in the temple or forehead, extending towards the eyes; discharge thin, copious, flows mostly through the posterior nares, causing choking at night, and when lying down; I have verified the latter symptoms in my practice repeatedly.

Senecio Aurens.—Inability to fix the mind on any one subject; dull, stupefying headache; secretions slight or suppressed; sneezing, burning and fulness in the nostrils—the burning being especially confined to the naso-pharynx; dryness of the mouth and pharynx; some pain in swallowing.

Thuja.—Pain at the root of the nose; ulceration and scabs in the nose; discharge of thick, sometimes offensive, green mucus, mixed with blood; red, itching eruption on the alæ of the nose, which is frequently moist.

Wyethia.—Pain over the right eye; pricking, dry sensation in posterior nares; sensation as if some foreign substance were in the

nasal passages—an effort to clear them through the throat affords no relief; dryness of the fauces, with constant desire to clear the throat by hemming.

Besides these remedies, the following deserve due consideration: Arsenicum, Ars. iod., Calc. phos., Calc. carb., Calc. iod., Hepar., Hydrast. can., Hydrast. mur., Puls., Sepia, Bals. Peru.

As a general rule, the above remedies will be found sufficient. However, in particular cases, other remedies may have to be chosen.

In addition to the treatment given above, the nasal cavities should be cleansed once a day with some non-irritating solution, either with a douche, atomizer, or very small syringe.

I always advise the use of a small glass syringe, directing the patient, as the piston or rod is pushed in to gently snuff up the solution, propelling it along the nose to the naso-pharynx, cleansing this cavity, and allowing it to pass out through the mouth.

Discussion.

George H. Quay, M.D.: I like the ring of Dr. Teets' paper. Would that every Homœopathist in the land could read it and profit thereby.

There are two classes of men in our school: one, who thinks that every case he has demands an operation, and when he is unable to perform it must turn it over to an Old-School surgeon who will not even recognize him as a physician; the other class, who imagine that everything under the sun is amenable to internal medication—this is the class who, in the main, bring our school into disrepute. We accuse the Old School of not investigating, when our own ranks are full of the same tribe.

The men in our school, possessing the largest experience in the treatment of catarrhal troubles of the upper respiratory track, are the ones who most readily acknowledge the need of surgical interference in these complaints. In fact, there is no rhinologist of extended experience but can adduce case after case of hypertrophic rhinitis that failed to obtain relief from internal prescribing alone, or combined with spray, until redundant tissue was removed. In the form of rhinitis just alluded to, the results following proper operative treatment are often little less than miraculous.

There is one condition that I think is often overlooked or neglected in hypertrophic rhinitis. I refer to the enlargement of the posterior end of the lower turbinals. In my experience this raspberry-appearing enlargement is one of the most frequent accompaniments of hypertrophic catarrh. The quickest and surest way to reduce it is to slowly amputate with the cold snare.

In cases combined with sneezing do not fail to treat this portion of the lower turbinal, and the septum directly opposite.

In regard to the means of cauterizing, I find nothing that gives the pleasure and satisfaction of the galvano-cautery. Acids I seldom resort to, except acetic on the septum. The fumes of chromic, in fact of all acids, are too penetrating. There is another condition frequently existing in chronic rhinitis that causes much discomfort. I refer to hard pieces of mucus attached to the vault of the pharynx. The remedy is the post-nasal douche; sprays usually have no effect. Finally, do not forget local cleanliness.

NASAL SURGERY—ITS USE AND ITS LIMITATIONS.

By Eugene L. Mann, M.D., St. Paul, Minn.

Advance, in the material world, is always gradual and permanent. A rock adds to its size by constant accretions; a tree increases in bulk by new growth each year; everything moves slowly and surely; each advance is perfect in itself, and remains for all time or until changed into other forms of matter.

Per contra, advancement in the mental world is seldom, if ever, slow, gradual, and permanent. Mental activity moves in waves, and each wave has its recoil. The early steps in any movement may be gradual, but a point is soon reached from which a leap is made, and the influence of this has been usually to advance too far, and a partial retreat has been made. This is true in all departments of thought—religious, scientific, medical—even fashions go by fads.

This mental movement may often be most fittingly illustrated by the pendulum. It swings to one extreme, then back to the other, and finally rests at a middle point. The illustration fails only in that the resting-point is a step in advance of the starting. The fabled frog, who got out of the well by advancing two feet by day and slipping back one by night, is perhaps a better simile.

For long years the nose, considered as an organ of the olfactory sense alone, was given very little attention. The sense of smell, while giving considerable pleasure and warning of danger from products of decay and disintegration, was not an important sense; it had no standard of excellence, and its loss was unaccompanied by any serious distress; hence, there was little call for its treatment.

At the discovery, however, of the respiratory function of the nasal chambers, rhinology sprang into existence, and, almost coincidently, nasal surgery. From an organ of no importance, the nose vied even with the uterus in the complexity and multiplicity of the ailments laid to its disorders; and with the aid of a local anæsthetic surgical

treatment advanced from an occasional operation to remove polypoid growths to almost daily routine practice.

It is not my purpose or intention to dispute the value of nasal surgery; its *use* is just as much a part of the title to this paper as its limitations. There can be no doubt that it has cured many cases of chronic catarrh; that it has pointed the remedial way in pharyngeal and laryngeal cases which before defied treatment; that it has helped very materially in the development of children by placing them in a condition to use their lungs, and by their use avoid their diseases; that it has conquered troublesome and persistent neuralgias and made the deaf to hear. These are its achievements. I will not dwell upon them; you all recognize them; and to pronounce an eulogy on the achievements of nasal surgery would be valuable only for its rhetorical merit, and that it voiced the opinion of all.

These results have been not only salutary but brilliant and immediate. Few achievements in medicine are more appreciated by the patient or gratifying to the physician than the relief of nasal stenosis. This immediate and gratifying result has been, I fear, an incentive to a too frequent and at times ill-advised use. While recognizing the benefits, we must not generalize too broadly. Every case of middle-ear catarrh is not cured by nasal operation, nor is every asthmatic relieved of his paroxysms. Further still, every case that goes from our hands breathing more freely through the nostrils than formerly is not permanently benefited. To individualize cases is a work for the future. To precisionize our knowledge and be able to tell just what reflex symptoms we can relieve and just what pathological changes in the nasal chambers are accompanied by peculiar symptoms, must be a work of experience and compilation.

All physicians who do special work in the upper respiratory tract appreciate the benefits of surgical measures. But what of its limitations? They are just as important as its uses. They call for our more special attention because they are not as plainly seen and are more concerned with ultimate than present results.

Historically, nasal surgery is an outgrowth of the discovery of the respiratory function of the nose, and of the dependence of the health of the more delicate structures below upon the power of the nasal turbinated bodies to warm and moisten the air current before it reaches the larynx and lungs. Its object is to make possible this respiratory function; to bring into service the physiological activity

of the turbinated bodies, and it should stop short of any procedure that would interfere with this physiology. The aim of nasal surgery is not to clear an obstructed nostril, but to restore normal physiological breathing.

There are several ways in which the physiological function of the turbinated bodies is lost: first, by atrophy or loss of the turbinated bodies themselves; second, destruction of the natural sensitiveness of the mucous membrane so that it fails to respond to the stimulus of cold or dryness; and third, any obstruction that prevents the air passing through the nasal chambers.

The first class includes atrophic catarrh, specific disease, etc. These are unfortunate cases; the turbinated body itself is wholly or partially lost, and little can be done except in a palliative way; surgical interference, other than the removal of carious bone, is not to be considered.

In the second class, loss of sensitiveness of the mucous membrane, may be placed a few isolated cases of uncertain origin. Atrophic catarrh again, and those cases where, from many and repeated cauterizations, the inside of the nostril becomes a mass of scar-tissue. The cautery has become so general and cocaine has made its use so painless and easy, that it has been much abused; it has been used fearlessly and recklessly and by everybody without regard to the destruction of epithelium. Scar-tissue is not sensitive-tissue, and a nostril, where the surfaces have been broadly seared over, while it may be more spacious than formerly, is scarcely more useful; the membrane has lost its appreciation of the stimulus of cold, and the turbinated bodies are not aroused into activity. In cauterizing, much more is gained by burning deeply but not broadly; the contraction following is greater, and the mucous membrane is left almost intact, and its sensitiveness preserved.

The third class embraces all cases where the air cannot pass through the nostrils, and hence does not come under the influence of the turbinated bodies. It is in this class of cases that nasal surgery has won its laurels, and its achievements have been so brilliant that we have at times been carried away by them, and aimed to restore the nasal spaces rather than the respiratory function; as the late Sir Morrell McKenzie once said, the nasal spaces have been cleared with an energy that would do credit to a backwoodsman. When a nasal or post-nasal tumor exists it should be removed; a deviated septum,

when it obstructs the air-current, should be straightened; hypertrophied mucous membrane should be reduced in the way that will do the least injury to the turbinated bodies. I believe, that where septal spurs coexist with enlarged turbinated bodies, it is better surgery to operate from preference on the septal tissue and preserve the turbinated bodies intact. In those cases where the obstruction is caused by a projection of the turbinated *bone* into the lumen of the nostril, we are sorely tempted. The removal of the bone and turbinated body "in toto" would have an immediately gratifying effect upon the patient, but in gaining this we have removed the physiological respiratory organ of the nose; we have also produced a nostril of enlarged calibre and dry, and the ultimate result is retained hardened secretions and atrophy. Instead of restoring nasal respiration we have destroyed it, and destroyed it permanently. A patient had better go through life with a partially obstructed nostril than become a sufferer from atrophic catarrh.

Nasal surgery has achieved wonders; it has brought great relief, and to many; but the very fact of its great use has led to its abuse. Patients are to-day sighing for portions of their anatomy sacrificed to the temporary relief of free nasal spaces.

In deciding upon operative procedures, let us consider not only present effects but ultimate results. Bear in mind, that tissue once removed is tissue lost and cannot be regenerated; that a nasal space too large is a more serious condition than one too narrow, for enlarged calibre means lessened air-blast and imperfect cleansing, and retained secretions soon dry and produce atrophy.

Recognizing these possible and ultimate results as a warning against too great zeal, let our aim always be to restore the physiology of the nose as an organ of respiration; and warned on the one hand and guided on the other, we are safe from temptation and a more lasting good to our patients.

REPORT

OF THE

SECTION IN PÆDOLOGY.

CHICAGO, ILL., June 3, 1893.

THE Section in Pædology held its meeting in Hall 29 of the Art Building, and was called to order at 11 o'clock A.M. The Section was presided over by Emily V. Pardee, M.D., of South Norwalk, Conn., Chairman, who opened the proceedings by delivering her Sectional Address.

"Prenatal Medication," was the subject of the next paper, which was read by its author, Millie J. Chapman, M.D., of Pittsburgh, Pa. Following the reading of the paper there was a discussion participated in by Drs. George B. Peck, of Providence, R. I., Phœbe J. B. Waite, of New York, N. Y., Bushrod W. James, of Philadelphia, Pa., W. P. McCracken, of Chicago, Ill., G. W. Bowen of Fort Wayne, Ind., Alfred E. Hawkes, of Liverpool, Eng., J. H. Henry, of Montgomery, Ala., J. A. Whitman, of Beaufort, S. C., and A. M. Duffield, of Huntsville, Ala.

"Rachitis," a paper by Robert N. Tooker, M.D., of Chicago, Ill., was presented by its author, and was discussed by Drs. B. W. James, of Philadelphia, Pa., A. M. Duffield, of Huntsville, Ala., C. D. Crank, of Cincinnati, Ohio, and by the author of the paper.

"The Awkward Gait of Children," was the title of a paper written and forwarded by Sidney F. Wilcox, M.D., of New York, N. Y. In the absence of the author, it was read by the Secretary of the Section. Discussion of the essay was by Drs. Sarah J. Millsop, of Bowling Green, Ky., William D. Gentry, of Chicago, Ill., and Gertrude G. Wellington, also of Chicago.

The Chairman announced that she had a paper from Dr. George E. Gorton, of Albany, N. Y. The paper had been presented at a meeting of Allopathic physicians at Albany. The chair said, in presenting it, "I should like to leave it to your discretion whether

it shall be read or referred to the Committee of Publication after it has been printed in the *Medical Record.*"

DR. PHILLIPS: There is a rule that no paper previously published is admissible into our PROCEEDINGS.

A motion was made and adopted that the paper be not received.

"Contagion in our Public Schools and its Prophylaxis," by Lucy Chaloner Hill, M.D., of Fall River, Mass., was read, and was afterwards discussed by Dr. George B. Peck, of Providence, R. I.

"Some Notes upon Headaches in Children," by Girard Smith, M.R.C.S., of London, Eng., was read by Alfred E. Hawkes, M.D., of Liverpool, Eng., and was discussed by Drs. Phœbe J. B. Waite, of New York, N. Y., A. M. Duffield, of Huntsville, Ala., and by a physician whose name was not mentioned.

The following papers were then presented by title and referred for publication:

"Albuminuria in Children," by Henry C. Aldrich, M.D., of Minneapolis, Minn.

"The Treatment of Meningocele, Encephalocele and Hydrencephalocele, by Means of a Collodion Cap," by J. Martine Kershaw, M.D., of St Louis, Mo.

"Albuminuria in Children," by William W. Van Baun, M.D., of Philadelphia, Pa.

The Sectional Meeting was then, on motion, adjourned.

SECTIONAL ADDRESS IN PÆDOLOGY.

By Emily V. Pardee, M.D., South Norwalk, Conn., Chairman.

"Do you hear the children crying, O my brothers,
Ere their sorrow comes with years?
They are leaning their young heads against their mothers,
And *that* cannot stop their tears."
Do you question why they have such sad and sunken faces,
Why they weep so bitterly?
'Tis because the Old-School doctor tends their cases
And they never tasted Homœopathy."

Mrs. Browning's part of this poem prompts my almost involuntary continuation, for her words so strongly suggest a dearth of Homœopathy, or ignorance of its efficacy; indeed our School had not at that time attained the reputation in treating the diseases incident to childhood, which it now enjoys. Children were, as Mrs. Browning expressed, "Martyrs by the pang without the palm."

There is no department in medicine more significant, none commanding more honest work and study, none where progress is more constant, and where the beneficence of our School is more appreciated by the world, than the department over which you have asked me to preside to-day.

I will not review in detail the progress in literature and scientific research; in the discovery, development, and proving of drugs, and mechanical appliances with which the past year has been pregnant. This advance has been referred to from every bureau since last Monday morning, and at this hour, Saturday afternoon, I feel like the ninth orator at a temperance mass meeting. Everything has been said and well said, and my repetition would only emphasize the old truth that "great minds run in the same *canal*." I cannot, however, forbear mentioning the most notable discoveries in our Materia Medica, which are now being made by the Old School and are incorporated into their literature as comfortably as the *Sandwich* Islands annexed themselves to our United States. It is but a few

years since it was announced in one of their leading journals, that some profound, but perfectly *regular* thinker had demonstrated that minute doses of Ipecac would arrest vomiting, and that Pulsatilla would correct menstrual irregularities, and later that Gelsemium was relative to hysteria, and many other like discoveries of our proven remedies. Grasping at these abstract facts, and prescribing the mother tincture in heroic doses, has resulted in much mischief in their hands. Perhaps a few years hence some ambitious Yankee may start out and discover America, and scoff at Columbus because he did not espy Chicago in fact, as seen at the World's Fair.

The successful persistent advance, which has been our watchword ever since the master expounded our law of cure, is the one cause of jealousy to our medical opponents. If we would stand still in the very footprints where Hahnemann left us, and not attempt to further the great truth he discovered and outlined for us, there would be little to disturb their envy, and the field of advance would be left to their own ambition. Did that grand and brave man, with prophetic mind, suppose that we, as physicians, would stand by a case of obstipation, caused by roast clams and old cheese perhaps, and wait for Sulphur or Nux vomica to act; or did he trust that with judgment untrammelled we would use mechanical auxiliaries? Not Calomel or live frogs perhaps, but whatever the case in hand calls for. Would he have us, in the case of the passage of biliary calculi, wait for China to act, or assist nature by the use of Glycerine or Olive oil internally and externally, and possibly to further relax the tubes by anæsthetics? Would he have us satisfied with the provings of his brief life, or develop and enlarge our Materia Medica by annual and faithful work? We want no "nickel in the slot" physicians, but personal workers every one.

Do our opponents adhere to the superstitions in vogue in the days of Hippocrates and Galen, and keep themselves fenced in by the ignorance and delusions of that age? Why no. The lancet and nostrums of the eighteenth century are unknown to the practitioners of to-day, and *their* pocket cases are filled with our remedies which we have been years in proving. Our modes and medicines are adopted by the advanced minds of the opposing school; and that is right; let them learn of us if so be the world is benefited thereby.

To this I must add that some of our own learned physicians "ad-

vance backward," and use the chemical combinations made to simulate our remedies, and which would deceive the very elect by the versi-colored tablets, which are of themselves works of art. "It is easier and quicker," say they, and if such national calamity ever occurs, as has been predicted by our opponents for half a century, as that *Homœopathy dies*, it will be on account of the unfaithful haste of its busy advocates. Every work done with fidelity needs time and care, and we should aim, when we take a comfortable fee for a visit, that we give in return an equal amount of comfort. With sick children, a prescription of medicine does not end our duty, especially when the mothers are themselves only grown children. We must not ignore the details of the clothing, the food-tray, the sleeping apartment, the play-ground, and even the play-mates. It all takes time and vitality, and we all take pay for just those commodities. We can, with good results, also prescribe for the young mothers that they read Dr. Winterburn's magazine, *Childhood* (I do not expect to get a cent for this advertisement!).

Our beloved Dr. Lilienthal once said in a lecture, "When called to see a sick child on general principles, it is always safe to order a bath, because many times it is indicated and many times it is such a treat, as the child never had one before." That seems exaggeration, but early in my practice I was called to a very comfortable home to see a child 8 months old given up to die of croup by an Old-School doctor; and when I ordered a hot bath the mother, grandmother, and nurse all informed me in a breath that the babe was "not a year old," and further explained that they had always understood that water must never touch the body of a child under twelve months. I superintended a thorough bath, while the family quaked with fear, but that baby is now alive, and I have taught her to tell this story.

Upon one occasion I was called where two children had malignant diphtheria, the third one having died. The attending physician was himself taken suddenly sick (and I did not blame him for so doing), when I was called to take charge of his cases. The family was one of wealth, and their apartments were large and well appointed; still, I could not quiet an odor that rose above all other smells, nor could I quite determine its origin. The closet door was "on a crack" and I peered in. On the floor lay the wearing apparel taken three days previous from the dead child, and which the distracted mother

"could not make up her mind to have touched." Now, I ask, of what avail would medication have been so near communication with this seething heap of germ culture? It all took time, and there was danger of its taking our vitality also.

Again, I believe we are too apt to trust too largely to nurses. I confess a good nurse helps out a poor doctor wonderfully. I have seen it often in my own practice. But nurses are not popes, and they *may* be human. They *expect* us to direct them, and if we fail to do so the blame is ours. In prescribing for children, we should always bear in mind any family taint or predisposition to constitutional diseases, and point at the hereditary or congenital diseases by way of the acute malady. Thus we often check serious ills and get no credit for it save on our own conscience books, which our accountants never balance.

In the treatment of children's diseases, Homœopathy has placed its patrons under lasting obligations by its ability to cope successfully with diseases formerly considered fatal, and an imperishable monument is reared in the hearts of those who witness to the honesty, learning, and industry of the followers of Hahnemann. I say most humbly, "Thanks be to God who giveth us the victory" over disease.

Let us not forget to be humanitarians as well as scientists in our care of the little ones, and never resort to surgery in croup or pleuritic effusions until we have conscientiously asked and answered the question: would we risk this little life if it were our own child? It is ours to sacrifice *for* our clientele, but not to sacrifice their lives on the altar of experiment.

The future is ours, and so is the continued labor which alone will keep us moving onward. Intelligence, learning, moral integrity, and personal merit *will* be recognized.

So tell the children, O my brothers,
To sing like little thrushes in their play,
For this same school that blesses many others,
Will bless them another day.

PRE-NATAL MEDICATION.

By Millie J. Chapman, M.D., Pittsburgh, Pa.

The education, evangelization and more thorough civilization of the world demands strong, healthy people.

A large percentage of all children born cease to live before the fifth year. Of those surviving, many are suffering from disease which unfits them for usefulness. If by any means we may increase the standard of health among children such efforts make us public benefactors.

The knowledge that we have saved a sick child for its mother brings as great reward as follows a brilliant operation; but the consciousness of having aided the mother in developing a strong, well child should bring increasing interest and satisfaction.

When children are well-born and permitted to live in good surroundings, having correct diet, dress and care, medication is uncalled for. It is a truism that every child has a right to thus enter life, but of the hosts as we meet them it is difficult to recognize health of infant or parent. It is well known that perfect health of nerves for the mother ensures normal position and presentation of the fœtus and makes labor a physiological process. Humanity as yet cannot all claim perfect health of nerve or development, and we oftener meet an abnormal nervous state which if continued leaves a lasting impress upon the child. Many a case of wakefulness or restless irritable child has no other ætiology. We have had valuable instruction upon "Preparation for Motherhood," but we should not lose sight of the fact that every child has *two* parents, and disease or unhealthful tendency of either or both is of equal importance and should receive medical supervision.

Prophylactic medicine is of the greatest importance. Preserving health is more desirable for the individual and society than restoring health. The writings of Hahnemann reveal his purpose to not only cure disease, but to eradicate the tendency thereto. Following the

instructions of this renowned teacher one may relieve present suffering and also modify the blight of inheritance. After an observation and experience of years, I am convinced that every prescription which corrects an idiosyncrasy or constitutional disturbance, contributes to a better state of the future progeny.

If it is better for a child when his training begins a century before his birth, how much more perfect will he be when his medication is started at the same time. If such training and treatment were continued for a few generations every abnormal condition might be corrected, and healthy parentage would be the rule instead of the exception. It is no longer considered necessary for woman to suffer the numerous complications of pregnancy for medical skill is able in a large degree to modify or wholly remove the painful states. It will soon be recognized that medicine should be administered, hoping to benefit the coming child. We can offer no universal panacea for inherited ills or congenital defects, but would call your attention to the marked improvement possible to many cases.

We conclude that potentized remedies will correct anatomical or structural deficiencies from knowing that Calcarea carb. 30 given in the morning, and Sulphur 30 in the evening, two weeks out of each month of pregnancy resulted in a perfect, healthy child where others preceding it had cleft palate or hare lip. Calc. phos. and Sul. given as above during seven months was followed by a perfect child where the former one had spina bifida, talipes and muscular weakness.

Graphites, Lachesis, Apis and Petroleum have at different times not only relieved the suffering of pregnant women, but so changed the embryo and developing fœtus that the unsightly eczema afflicting former children failed to appear. Tuberculous parents having one or more children who suffered from acute hydrocephalus, have later received Calcarea phos., Sil. or Sul. during the term and these children not only escaped the common perils of dentition, but resisted the floating germs of contagious diseases, even the Klebs-Loeffler bacillus finding no habitation. Able writers report instances where one parent contracted syphilis before marriage and the children were classed as premature labors or still births, but they changed the record to that of living children by a course of pre-natal medication. While much may be done in way of remedies and diet for rachitis, more may be accomplished by medication of the mother be-

fore the child's birth, giving her health that she will not transmit a tendency to such weakness. Injuries do not develop this malady in a child of perfect health. We may not only give ante-partum medication to avoid a repetition of ailments developed in children previously born as the celebrated Von Grauvogl advised, but by timely attention we may secure health for the first child. We would, if possible, have pregnancy begin with perfect health, physical and mental, of both parents. Human perfection does not exist, but we may strive for it by removing the abnormal conditions as we are permitted. She may not be the greater invalid, but we have more frequent opportunity of influencing the mother's system. Every evidence of disease in her which is recognized and overcome during its intra-uterine existence gives the infant increased advantage at birth.

If conception occur where marriage was prescribed as a cure for existing suffering dependent upon inflammation or spasmodic nerve action, we may expect accidents during the term and lying-in for the mother, and many nervous disturbances for the infant. There is a form of infantile paralysis due to injury of the nerves of the brachial plexus, caused by stretching of the nerve-roots, on account of the position of the head during labor. To one who has witnessed a faulty presentation restored by the action of remedies upon nerves and uterine muscles, this calamity seems to be an avoidable one.

We approve of all sanitary and hygienic influences for the coming mother; would be glad if every one had daily, in unlimited quantities, both sunshine and love, for these make her willing to endure and able to meet difficulties; but combined with all these, and greater in power, is the influence of the truly indicated remedy. In physical or mental irritation, our Materia Medica, with all its imperfections, guides us to measures which correct for the time, and if continued *cure* the disease.

Sometimes, when a woman becomes conscious that she is pregnant, she looks forward to nearly a year of discomfort; then, a period of greater suffering ending in death, or, if not, a continuance of invalidism, increased burdens and anxiety, without the protection, consideration, and tenderness of her life-companion which reconciles many to endure the inevitable, and in her agony she gives expression to the accumulated unreasonableness of generations of her ancestors.

The mental state varies from a generally unhappy condition to

that degree of insanity which makes her hate the coming child, and willing to risk closing her own life to accomplish its death and premature delivery. These deep emotions impress the character of the child she fails in destroying, and, more frequently than many know, gives bent to the mind of a cruel, hard character, an outcast and murderer. The intensity of the evil may be increased by the united purpose of both parents to limit fœtal life. "Some biogenic particle goes astray and through transmission impresses its moral bias upon the erring offspring."

I have seen so often the action of our remedies remove the feelings of hate, dread or fear, that to me it is evident we need only a closer study of indications, and their application, to produce a surprisingly improved condition of the moral tone of society. If half the time and energy spent in visiting prisons and in behalf of ex-convicts were devoted to soothing, making comfortable, and curing the morbid fears of pregnant women, we should have less demand for institutions for the feeble-minded, children's hospitals, reform schools, and penitentiaries.

If we would have health of the whole organism, a well-balanced, even character, every organ performing its function, every inclination toward normal conduct, we cannot too early begin the treatment of these morbid feelings. A close study of our provings enables us to see a similar in some of the following medicines, which you will see are nerve remedies for these disturbances or neuroses: Actea rac., Ars. alb., Cham., Coffea, Bell., Hyos., Stram., Nux vom., Plat., Anacard., Magnesia phos., and Kali. phos.

Then, we would have pre-natal medication begun with the birth of the parents, and wisely continued until each wife in full development, free from disease, with active brain and moral strength, is able to meet wifehood and motherhood with never a term in the hospital nor attention of surgeon, until she may feed her own child without poisoning its system or morals, or exhausting her strength; and until each husband shall have brain, nerve, muscle, and lymphatics in such normal action that he will not transmit weakness of character nor seeds of death.

Discussion.

Geo. B. Peck, M.D.: The object for which the admirable paper to which we have just listened was written commends itself to all, while the possibility of its accomplishment, even in part, and the

efficacy of methods recommended may be doubted by many. The reasonableness, therefore, of its teaching alone requires consideration.

In a New England city, in May, 1848, a young wife lay upon a sick-bed covered with the characteristic eruption of measles in its most intense form from head to foot, and expecting hourly the advent of her first-born. The husband was informed he could not expect the preservation of either. Promptly on time a girl appeared as roseate hued as the parent. The daughter fell a victim to Allopathic medication three months prior to the completion of her twenty-third year. The mother is still living. Now, if it was possible for morbific gems or their products to enter that uterus and produce upon its inmate the same phenomena exhibited upon its possessor, with equal rapidity, and at the same time it can be no less possible for our finely comminuted preparations to penetrate equally deep and perform their appropriate functions.

But, again, we know that growth and development depend upon that intangible something, for convenience denominated nerve force; that variations in the quality or intensity produce corresponding variation of result; that even maternal mental emotion leaves its impress on the offspring. We also know that we have power to produce variations in the nerve force at will; that we can produce mental impressions at will. Failure, then, to apply this knowledge can only be ascribed to indifference to the new-born or to professional incapacity.

Regarding the particular attenuations recommended it need only be said that too many observations have been made and recorded of physiological phenomena and drug aggravations produced by Homœopathic preparations above the twelfth decimal to permit any doubt of its efficiency to be considered reasonable. It may be added that the physician who prescribes even occasionally any preparation above the twelfth decimal attenuation unwittingly adds his endorsement of that statement, and I am inclined to count in with them all those who prescribe above the sixth decimal.

I cordially and fully endorse Dr. Chapman's paper, including the reference to the importance of paternal medication. "*Whatsoever* a man (or woman) sows that shall he (she) also reap!"

PHŒBE J. B. WAITE, M.D.: I would like to have heard Dr. Chapman's paper before beginning my speech. I would like to have had a copy of it and committed it to memory. It is too valuable to lose any part of it. The father of medicine, Esculapius, lived, we are told, I think, somewhere about nine hundred years before Christ. He had five children, three sons and two daughters, and all these children, admiring the skill of their father in medicine, took to medicine, the whole five, the sons and the daughters. From the three sons have descended all the doctors of the world, that is, men doctors. There weren't women doctors then. And while these doc-

tors in medicine were a long time getting around, you see the woman has got there just the same. So here we are descended from these two beautiful daughters of Esculapius; the one believed in preventive medicine, and the other in curative medicine. I did not read that these sisters ever came into collision in their practice, but their fame has come down to us. Hygeia, the beautiful daughter of Esculapius, advocated the use of a medicine which I would like to advocate for pre-natal medication. It is the blessed sunshine, the fresh home, the clean heart, and the loving kindness and tender mercy which should be shown for wife and expected mother. These are things which tell upon the children. If we believe in the transmission to the child of the mother's qualities, shall we not also believe in the healthy organization of the mother and the healthy organization of the father as well, because the father has something to do with these things. Very little, you may say; however, we will give him credit for what he has to do in the matter. Do we believe in tobacco blindness, in tobacco neurasthenia? Shall we not believe that these diseases are transmitted to the child, and shall we say that any wife has her husband's full share of kindness who is brought up in the air of the vile perfumes of tobacco? It is poisoning not only the husbands, but the wives and the children of this land. Do we believe in tea and coffee neurasthenia? Then shall we believe that the mothers who are sipping tea and coffee, who do not take their food, and who cannot get through the day without a cup of strong coffee in the morning can not be expected to rear children strong, vigorous and healthy. Shall we not expect them to be "bundles of nerves?" I have looked at mothers, and have seen them so proud over their children, beautifully dressed, and they say, "My little girl is such a nervous little thing that I hardly know what to do with her."

Dr. Chapman's paper is very much to the point. The medication, or the teachings of Hygeia, ought to have begun in the mother of the mother of this child one hundred years ago. This is the doctor I am speaking for now. The other daughter of Esculapius—I am ashamed to say I do not remember her name—is immortalized in a tree, the leaves and bark and flowers and fruit of which are for the healing of the nations. I suppose the use of this tree must have been to prevent disease, and it is used by the Homœopathic school, because we cure all the diseases that are curable. And so it may be necessary; indeed, it is quite necessary, to prescribe remedies for the mothers of unborn children.

Professor Lilienthal says, that cocaine and sulphur will save more children than all other remedies put together. We must not forget these remedies. Silicia, Gelsemium, etc., we will not forget; neither will we forget the remedies for those diseases which are inherited, but will prescribe for every mother the things which we have tried

to emphasize to-day; and we would prescribe, if we knew enough, the Homœopathic drug which would remove the sordid condition in a mother and help her. I believe that children are born to live, not to die; and the fact that one-half the children of the world succumb before they are five years of age is a terrible commentary on modern civilization.

B. W. JAMES, M.D.: I am much in favor of this latter daughter of Esculapius. I am very thoroughly in love with the first one that Dr. Waite has spoken of, simply because she was in favor of hygienic measures. If we are going to make a good, healthy future nation, we must begin our hygienic measures in all our surroundings. Sanitary science is doing good work, but it deals with the external world. It gives us good houses to live in, good air to breathe, good surroundings in every way. That is all very good, but the foundation of health must be laid also by placing good, healthy matters in the tissues of the human system, and we are not going to do that unless we give the proper medicines. Give the system of a mother good blood; make the cells act in harmony; make the nervous system act properly upon these cells and upon these tissues.

I look forward to the time when diseases may be annihilated; when the human race may reach that point of millennial health that we shall be exempt from disease. We shall do it, if at all, by annihilating one disease after another, and then our mission as physicians will be ended.

W. P. MCCRACKEN, M.D.: I am not foolish enough to think I can discuss a paper that I have not read. Henry Ward Beecher once said, when asked for his rules for longevity: "Choose your father and mother;" and I think that is what one would have to do to be very long-lived. I remember a case where the mother, during gestation, shut herself up in her own house and refused to go out upon the street. Now, we cannot alter God's plan of creation, and the man or woman who sneers at or ridicules a woman on the street or anywhere, who is fulfilling the law of God, is not fit to be upon this earth. She cannot, probably, bring forth an intellectually nor physically strong man or woman, and be shut up in a house during the nine months before confinement. Then I would make a strong cry against the dress of woman at that time. Many women think that if they are tightly laced around the waist, and keep their waist-measure as usual, that is all that is necessary. I think more can be done by dressing than any one thing, and then plenty of fresh air and bathing and good, common-sense diet, and I don't believe there would be much need for medication.

G. W. BOWEN, M.D.: The first ten years of a doctor's life he has to learn what he doesn't know, and establish his reputation as a physician. In the next ten years he works for pay. I have passed those years, and have spent a great deal of time in learning how we can

cure the results of a father's indiscretion and of a mother's sensitiveness. If the weakness is below the belt, Sepia will remedy that surely. If there are dyspeptic troubles, Nux vomica and Belladonna will prevent it. Consumption we can guard against by Bryonia and Calcarea, etc. In weak heart, we can obtain benefit from Belladonna and Arsenic, and, perhaps, Calcarea; and so on, through the list of parental ailments.

Alfred E. Hawkes, M.D., of Liverpool, England: I think this is one of the most important papers that we have had during the Congress; and I am very glad to have such a thoroughly Homœopathic paper. Of course, I don't think that hygeia can be neglected for one moment. What I will say will be chiefly on ante-natal medication. I would like to refer to some five families in as many minutes. One disease has not been referred to this morning—laryngismus stridulus. In one family, three children had died of it, and I was called in to see the fourth child. Cuprum, etc., were tried, but the child died. During the fifth pregnancy I had early opportunity of giving Calcarea and Sulphur, and in the sixth pregnancy the same course was followed, and to-day that woman has two healthy children of which she is thoroughly proud. Since that time I have saved others. In another case of trouble of the bladder, a record of which you will find in this month's *Review*, the child, a boy of two or three, had tubercular disease of the bladder. That was diagnosed by Reginald Harrison, who assisted me, and the child was cured of it by Calcarea alone. The mother was given it, and the next child was perfectly healthy. Another child was born rachitic. The mother was treated in the same way, and the next child was born perfectly healthy; the third child, the mother not having received treatment, was born rachitic. During the fourth pregnancy I had full sway, and treated the mother in the usual way, and the fourth child was absolutely healthy.

J. H. Henry, M.D., of Alabama: I am very glad to be here to-day, to see this question discussed in the light of Homœopathy. Take a series of abortions in a family; we commenced with our remedies as high as the thirtieth, and we followed Hahnemann's treatment. I will say, I have seen more fatality with men who offered thousands of dollars for the cure of their children, and where every single rule of hygiene was carried out; the drainage was perfect, the house upon the mountain top; and I have seen six children lie down in one family and die, one after another, with every hygienic principle carried out for years. I remember one case, where a man says to the doctor, "Here is a check for a million dollars if you will cure my last child." Every sanitary measure was carried out, but the child died. Coca is the remedy that it seems to me the Homœopathic physicians have forgotten. Muller, of Leipsic, published in the *British Journal*, of October, 1857, 49 pages upon Coca, and he expresses

the opinion that, in the nervous diseases of children, it is one of the most potent remedies. He speaks of the benefit of dropping it in the eye, and producing a partial deadness. The allopathic physicians have taken that up, and published it as something new.

J. A. WHITMAN, M.D., of South Carolina: Every one has a hobby, but you havn't hit my hobby, and that is diet. What is medicine if we don't have food? If the mother does not have the proper nutriment for her child, what can we expect of the child? I think we should look to the table for a great deal of benefit, as this is lost sight of more than anything I know of.

W. P. MCCRACKEN, M.D.: I beg your pardon for rising again. I would like to say one word to the philosopher who has come very near to the Creator in his work. I would like to suggest to him that if he would teach the husband of a pregnant woman how to control himself, it is a surer preventive of evil than Mercurius.

A. M. DUFFIELD, M.D.: There is one point that I would like to speak of that has not been mentioned, and that is pre-natal treatment for easy child-birth. There are some children who are born with very little vitality, when treatment has been employed to prevent hardening of the fœtal bones. I wish to add my word of warning in carrying this treatment out. I had, two years ago, a little one come to this world, and it has been sick ever since. The starving of the osseous tissue has had such an impression upon its body that it will never amount to anything. The treatment, prior to labor, had the desired effect. In two cases, prior to this, the mother was a great sufferer, but in this third case the mother abstained from all those articles of diet which would favor osseous development, and the result to the little one was starvation.

RACHITIS.

By Robert N. Tooker, M.D., Chicago, Ill.

I know of no disease in the whole list of human ailments more interesting than that which forms the subject of this essay, whether it be considered from a pathological, an historical, or a clinical point of view. Here we have a disease common to all nations, climes, and kindred, with symptoms, phases, and features that are plainly recognized the world over; a disease which, while rarely fatal, produces serious and irreparable ravages in the framework of the organism, which in its advanced stages affects every organ and every tissue in the body; stunting the growth of the young, a blemish upon the beauty of the mature, a serious menace to maternity from distortion of the pelvis; a disease whose effects we are powerless to overcome, and yet one which is conceded by all authorities to be easily preventable. Such is a brief and partial description of the affection to which I invite your attention. I shall waste no time in describing the features of well-marked cases. Its pigeon-breasted, narrow-chested, bow-legged victims are common sights in every land, and their clinical history is familiar to every physician. I shall not spend your time either in a discussion of controverted points, such as heredity, syphilitic complications, etc.

I desire rather to point out, as clearly as I may, the early symptoms by which the rachitic cachexia may be recognized before any serious damage is done to the organism, and which, to my mind, have been ignored or treated carelessly by those who have written upon the subject; and then to give you what my own experience has taught me to regard a specific means of averting all harm by promptly arresting the progress of those symptoms, as well as aborting the disease itself.

However we may regard rachitis from a controversial standpoint; however so many factors may be considered as entering into the ætiology of a given case, all authorities are agreed upon one point,

viz., that the one factor that enters prominently into every case is the factor of defective food. It matters not whether the rachitic child has been nursed at the breast or bottle-fed, the one indictment that cannot be quashed, the one fact that cannot be denied, is the insufficiency or inefficiency of the food supply. In the beginning of every case of rickets there is somewhere a fault that amounts to a failure in the matter of alimentation. The nourishment does not nourish. Some essential element necessary to the economy is either absent or is presented in a form which is ineffective. With a ravenous appetite there is lack of normal growth. With abundance of aliment there is perverted nutrition. Abundance does not satisfy; there is starvation in the midst of plenty. When breast-fed children develop the rachitic habit it is usually due to prolonged lactation, and it is of nurselings that I desire first to speak. In doing so, the necessity of brevity must excuse my apparent dogmatism.

Now there are certain facts regarding lactation that have a bearing on this subject, and these facts are so frequently observed as to be incontrovertible.

First. The health of the mother and the abundance of her milk is not always a reliable criterion by which to judge of its nutritive qualities. In other words, there are many women in perfect health and with an ample supply of milk who cannot successfully nurse their offspring.

Second. It is a law of nature, to which there are few if any exceptions, that every nursing woman's milk begins to deteriorate in quality after she has nursed for a period of from seven to ten or twelve months, and this deterioration progresses steadily, whatever may be her general health, until she ceases to perform the function.

Now it is a significant fact that while rachitis is far more common among bottle-fed than breast-fed children, it still does occur among children who are nursed at the breast, and is very much more common among those who are nursed into the second year. Indeed, statistics show indubitably that there is a direct and proportionate relationship between prolonged lactation and rachitis. I know of no accurate means of ascertaining the time when the milk begins to deteriorate in a given case by any chemical, microscopical, or mechanical test.

The time unquestionably varies with different women and with

the same woman at different times, but I am satisfied from personal observation that with American women, especially with those living in the large cities, the time of beginning deterioration is, on the average, less than twelve months. In some cases it may occur as early as the fifth or sixth month. As soon as the milk begins to deteriorate the child feels it. The evidences of mal-nutrition are soon manifested, and to the experienced physician the signs are unmistakable. Its body may still be plump and its color normal. Its bowels may be regular and its appetite unimpaired. It may not as yet show any marked changes in temper or reluctance to being fondled. Long before there are any signs of articular enlargements anywhere; long before there is any development of a "rachitic rosary;" long before there is any flattening of the cranial bones or incipient craniotabes, there are symptoms of unmistakable import if only they are given their true significance. The first of these signs to appear usually is habitual sweating of the head while sleeping. Cranial perspiration during sleep, and especially during the day-naps, is always ominous. It may not always point to rickets, but it is always a dyscrasia.

But the most significant and certain of the early signs of impending rickets is found in the delayed evolution of the teeth. I do not refer altogether to the eruption of the teeth, although this has its significance, but to the whole phenomena of teething. A perfectly healthy child should show some of the usual signs which accompany this process by the fifth or sixth month. If this age be reached, and there be no increase of the salivary secretion; no tumefaction of the gums; no irritation of the nervous system, accompanied with suggestive actions pointing to the mouth as its seat; if, in a word, there is no change in the inner contour of the jaw indicative of activity there; and if this condition goes on to the seventh or eighth month, the watchful physician should be on his guard. If, in addition, cranial perspiration is present whenever the child slumbers; and further, if the mental condition, the settled characteristic melancholy, is apparent, we need not wait for further development to diagnose the disease.

Another symptom connected with teething is often present in children in whom the disease has started, after one or more teeth have erupted. It is the prolonged interval that elapses between the cutting of single teeth or pairs of them. These intervals are, as a

rule, reasonably regular in healthy children, and any unusual delay in the continuance of the process of tooth evolution should not be allowed to pass unnoticed.

When these conditions are recognized, it is neither an act of prudence or wisdom to delay a radical change of diet. The child should be taken from the breast at once and placed on artificial food. At the same time it should be given systematically and persistently the indicated Homœopathic remedy. Our pharmacopœia is rich in rem edies of untold value in these cases. *Mercurius Solubilis*, *Colchicum*, *Asafœtida*, *Silicea* and *Sulphur* have all been given successfully in appropriate cases, besides many more which I need not name. But the remedy of all remedies—the one which is in the truest sense Homœopathic to the typical case of rachitis in all its stages and phases; the one remedy to be first thought of in the incipiency of the disease; the remedy which, in itself, is a standing monument to the genius of him who gave to the world the immortal aphorism, "*similia similibus curantur*"—is Phosphorus. Whoever reads a proving of Phosphorus, reads a description of the essential features of rachitis. Even in the cases of poisoning from this drug, there is much that is suggestive of its disease similimum. Phosphorus has produced osteo-malachia in the adult, a diseased condition which, in its course and nature, is almost identical with the rachitis of infancy. But clinical experience shows that we do not get the best value of Phosphorus when we give it in its simple and direct form. It combines too readily with oxygen to form Phosphoric acid for it to serve our use. By adding it to lime, however, and forming our Calcarea phosphorica, we have a remedy for rachitis *par excellence*. Calcarea phosphorica covers more completely than any other single remedy the full picture of a typical case of this disease. It has both fontanelles open, tardy dentition, sweating of the head, the pot-bellied abdomen, indisposition to being handled, the settled melancholy, the soft, spongy condition of the bones; and, indeed, the whole catalogue of symptoms with which you are so familiar. Many of these symptoms are also covered by Calcarea carbonica, but not to the same extent and fulness. Comparing the two drugs, I should say that Calcarea carbonica meets more quickly the objective symptoms, while Calcarea phosphorica more its subjective ones. In other words, the first acts on the blood and the soft tissues, while the other affects the osseous and the harder tissues. The one acts superficially, the other more profoundly.

But medicine alone will not cure rachitis. The treatment must be hygienic and dietetic, as well as medicinal. As we have seen already, the original ætiological factor always present in the disease is defective food. This defect must be corrected. The food must be changed. Cow's milk, as an exclusive diet, is, in these cases, inadmissible. Its tendency to form lactic acid simply feeds the morbid condition. All foods requiring an addition of sugar to make them palatable are injurious for the same reason. If you take an atom of sugar and split it in two, you get, as a result, an atom of lactic acid and an atom of alcohol. But lactic acid is already in excess in the blood, and is creating mischief in all the tissues. To add more is to add fuel to the flame. For this reason all starchy foods are pernicious, and this is why the great majority of the so-called "baby foods" fail to meet the requirements of these cases.

Undoubtedly, the nearest approach to an ideal substitute for human milk, and certainly the one best adapted to the needs of a rachitic child, is the dextrinized food of Liebig. In the preparation of this food all of the starch of its constituents—wheat and malted barley —is transformed into dextrine and grape sugar. It therefore requires no additional sweetening. Being prepared from the entire grain, it is rich in phosphates and other earthy salts and all needed nitrogenous matters.

There are various preparations of malted foods in the market, but I am free to say that I prefer that known as Mellin's food to any other. Perhaps my preference for it is due to the fact that I am more familiar with it. Certain it is, that in the nearly twenty years that I have used Mellin's food I have never seen a child become rachitic under it, while I have seen numerous cases that had become rickety under other foods restored to sound health by its use. It is more highly dextrinized than any other of the malted foods, and is more uniform in its preparation. When mixed with cow's milk in due proportion, it fulfils every requirement for the full nutrition of a healthy child.

The brief time allotted to me precludes a scientific comparison of different foods or even a mention of them. I have made no attempt to exhaust the subject which is here presented either in the matter of food or other aspects, but only to draw attention to certain points that to my mind needed emphasis, and to record my personal experience and individual observation in the matter of therapeutic and dietetic treatment.

Discussion.

B. W. James, M.D.: This is one of the diseases that will come under my idea of annihilation. I apprehend that the disease does not always originate from an insufficient amount of nourishment. There seems to be some abnormal condition of the body which requires a remedy. We must endeavor to cure the disease as we find it. The symptoms are: Sweating of the head; great irregularity in teething, showing that the osseous structure is not getting its proper amount of material for building up the teeth; and then there is likewise a determination of too much or too little material to one structure or another. In the application of our remedies we endeavor to harmonize all the tissues and make them go on as nature intended throughout the economy. In regard to the best remedy, I fully coincide that it is Phosphorus. I have been in the habit of giving Calcarea phos., which answers every purpose, and is perhaps better in many cases. Frequently the glands of the intestinal tract are involved, and those of the neck and other parts of the body greatly disturbed, and Calcarea carb. is a magnificent remedy in that condition. An excellent remedy, where anæmia exists, is Baryta carb. Sulphur is an admirable remedy to add to the Calcarea. In many cases all our efforts will not enable us to change the condition of the system, and yet in many cases we can do a great amount of good by adopting Homœopathic treatment.

Dr. Duffield: I had a case in my student days which was a very good illustration of this rachitic condition. It was a negro boy of 4 years. He was unable to stand; his legs were bowed and crossed, and he had a very large head on a very little neck. There was a hole through the spinal column, and the soft matter could be touched with the finger. His pulse was 204 and his temperature 105, and the pulsation of the heart was so pronounced that you could see it through the chest wall. Physicians of the opposite school said he could not live twenty-four hours. I had heard the lectures on Calcarea carb. and used it then. The next day I found my little patient was better, and as I went, day by day, he improved, until, finally, in the course of six months he was able to stand up and get around by holding on the chairs. I gave the Calcarea carb. in the third decimal trituration, at first once an hour and then once in three hours, and then every other day.

C. D. Crank, M.D.: I think one mistake lies in the fact that rachitis is not recognized early enough. I will give you three symptoms in recognizing this disease: first, a peculiar watery discharge from the nose; second, a peculiar wakefulness and restlessness at night—touch the crib and the child will start; third, the sweating of the head. It may be rachitis; it may be tabes mesenterica. If the child lives long enough, it may be epilepsy. If you wait until the trouble is developed, you will have difficulty in treating it. Cal-

carea phos. is a grand remedy, and there is another which I resort to successfully. It is not medicine but food that feeds the nervous centres. I refer to oil. Rub the child with the best Olive oil, and feed it Cod-liver oil to build up its little organism.

R. N. Tooker, M.D.: I am rather disappointed that no one has taken exception to some statements in my paper. I can only repeat what I said in the paper, that I think it a great mistake for the average American woman to nurse her babe beyond twelve months. Her milk then becomes thin and watery, and the babe should not be nursed through the second summer. We have artificial foods that will be far better substitutes.

Now let me enter protest against another practice I find common among physicians, and that is correcting the acidity of the milk by keeping the milk in an alkaline condition by the addition of lime-water. It is a very irrational practice. If you want to correct the acidity, give soda, which is far better than lime-water.

When the chairman solicited a paper from me, she limited me to fifteen minutes; and so, when I got to the matter of food, I found I had only a minute left to discuss it. If I had had time, I would have mentioned other foods that I regard very highly.

THE AWKWARD GAIT OF CHILDREN.

By Sidney F. Wilcox, M.D., New York, N. Y.

I desire to call attention to a class of cases which, as a rule, are much neglected. These cases are the children who walk awkwardly, with toes turned in and knees knocking together, but not to a degree sufficient to induce the parents to seek surgical advice.

This awkward, shuffling gait is generally attributed to laziness or carelessness on the part of the child, who may be constantly lectured on the subject and told to turn out his toes, which he may do for a short time in a constrained manner, with hands spread out as though he was trying to walk and balance himself on the edge of a board. Frequently, under the watchful eye of the parent or nurse, the child may with difficulty maintain a correct position, but the moment his attention is diverted the bad position is resumed, or, if very much wearied by a long walk or other exercise, the deformity (for such it becomes then) will be greatly exaggerated.

The toeing-in is not the only form of the trouble, but it is frequently, if not generally, combined with a partially flexed knee. Sometimes the toes, instead of turning in, turn out, and the arch of the foot is depressed.

The general belief is that the child will outgrow the trouble, and to a great extent, as he grows older and becomes more self-conscious, he does manage to conceal it, but neither the cause nor the difficulty itself becomes entirely removed. As the child grows older, he becomes ashamed of his crooked legs and awkward gait, and makes an effort to correct them, but he does it at the expense of unusual fatigue and a strain upon weakened muscles.

The cause of the difficulty under consideration is that there is an unequal balance of muscular power on the opposite sides of the limbs. Either through some prenatal influence or some condition developing subsequent to birth, the muscles of one or more groups become partially enervated; in other words, partially paralyzed.

This term is perhaps too strong to apply to this condition; probably the term weakened muscles is better. At any rate, whichever term is applied, the fact remains that the weakened muscles fail to do their whole duty, and the consequence is the bad position and awkward gait before mentioned. Under the stimulus of the will, the position may be corrected and remain so as long as this stimulus is acting or until over-fatigued, when the muscles give up in despair and become more relaxed than ever. I have seen a child who had a moderate degree of toeing-in under ordinary conditions become absolutely deformed on returning weary from a picnic, and the feet so badly turned in that in walking he raised one foot over the other to avoid hitting them together.

The study of the reflexes and causes of nervous and muscular strains are now being actively pursued by the profession, and why not pay some attention to the condition here presented. The nervous irritation induced by unequal muscular balance of the ocular muscles, and the reflex irritation of spasmodic contraction of sphincter muscles, will doubtless be considered at this meeting, but we must remember that the human system is a confederaton of parts, and a weakness in one part weakens the whole, and that anything which acts as a drag or which causes an unhealthy weariness during the formative period of life, must leave a more or less lasting effect if allowed to remain uncorrected. I do not wish to exaggerate the importance of the subject; the children thus afflicted may not give evidence of any special reflex irritation. As a rule, if a child does not suffer actual pain he does not complain; the only indication perhaps is the awkward hobbeldehoy gait and weariness.

The muscles usually most affected are the peronei in the leg and the quadriceps extensor in the thigh. The other muscles may be affected, but weakness of these in particular is most likely to cause the condition of toeing-in and flexed knee. If combined with laxity of the internal lateral ligaments of the knee-joint, we also have the condition of "in-knee" or "knock-knee."

As the whole trouble consists in the lack of muscular balance, the indications for treatment are plain. The strength of the affected muscles should be brought up to the normal after a careful comparative test of the strength of the opposing groups. This should be done by one skilled in finding the motor points on the surface of the limb with the galvanic current.

The comparative tests should be made of the excitability of the opposing sets of muscles, and the results, as shown by the milliampere-meter carefully noted, due allowance being made of course for the varying resistance on account of the varying distances of the nerves from the surface, etc. Then the treatment of the affected muscles by galvanism should be carried on systematically, the applications being made from two to six times a week, as the case may require. In addition to this, massage to the affected muscles should be given regularly, and if any constitutional condition seems to indicate their use, internal remedies should be employed.

In some cases mechanical treatment may be necessary as an adjunct to the electricity and massage. For this purpose a light bar, fastened to the shoe and running up the outside of the leg to a pelvic band, should be employed. There should be joints in the bar corresponding to the ankle, knee, and hip-joints, and the amount of eversion of the foot may be regulated by a set screw between the knee and hip. This brace may be made very light, and only strong enough to produce the effect desired.

It is necessary to have the pelvic band with the brace extending from it to the shoe, as it is impossible otherwise to get sufficient leverage to evert the foot.

In very severe cases it may even be necessary to employ a more powerful apparatus, like Doyle's spring rotator, but cases of such severity hardly come within the range of this paper.

Discussion.

Sarah J. Millsop, M.D., Bowling Green, Ky.: It is with hesitancy that I comply with Dr. Pardee's request to discuss this paper, for the reason that I belong to that large and formerly very useful army, the general practitioner, now being relegated to the top shelf as back numbers.

We have been told here that women have not been asked to take a more active part in these deliberations for the reason that they were *not* specialists.

But, as all women are specialists in diseases of children, I may venture to say a few words on this most important subject, a subject to which not enough attention is paid, as the awkward gait of children means, when not corrected, the awkward gait of men and women.

In the South, where I live, I have found it positively painful to watch the crowds of country-people who flock to our city on what is called "show day." So many have not only an awkward, shuffling

gait, but they are round-shouldered, slouching, knock-kneed and club-footed.

This I think, in great measure, is the fault of mothers, who, not realizing the importance of forming correct early habits, or being burdened with domestic cares, leave their children to "grow" like Topsy, or, to come up, hap-hazard, like the young of the lower animals, but without their natural grace of motion.

In my opinion, a judicious course of calisthenics in the school or at the home would do much, not only to prevent but to counteract the bad conditions the doctor refers to.

Where the muscles are at fault from a weakened condition, no better measure can be recommended than the use of massage, with the inunction of some nutrient oil. Where constitutional dyscrasia underlies these bad conditions, our materia medica will give us most effectual aid. We have, doubtless, all found a most potent ally in our Calcareas, especially in Cal. phos., in overcoming deformities in children. One dietetic measure I should recommend above all others is the use in some form of the entire wheat.

Chemists tell us that the kernel of wheat contains, not only most of the elements needed in the system, but just in the proportion in which they are needed, even to the constituents of teeth, nails and hair. That our children are fed on the least nutritious portion of this cereal, which forms our "staff of life," while the most nutritious portion is given our lower animals, may account for the greater physical superiority of the latter.

The whole wheat is not only a builder-up of the young, but there is nothing to equal it as a repairer of waste tissue in the adult. Its constant use will keep brain and body young and active long past the allotted three score and ten.

W. D. Gentry, M.D.: I want, in this connection, to earnestly suggest to the physicians of this country the importance of looking after this very serious matter of phymosis, and if time allowed me, I would like to speak at more length on this subject.

Gertrude G. Wellington, M.D., Chicago, Ill.: I would like to add, that in cities like New York, we find a great deal more of that complaint than in Chicago, I believe, largely from the fact that the children are confined to pavements which are very hard on their little bones. The remedy for that is putting them where their feet can have access to the soil, that when the little foot is put on the ground the heel sinks.

CONTAGION IN OUR PUBLIC SCHOOLS, AND ITS PROPHYLAXIS.

By Lucy Chaloner Hill, M.D., Fall River, Mass.

America's pride is her common schools.

Decade vies with decade, State with State, in furnishing better means of education.

Edifices are erected which adorn the city, and afford comfort and pleasure to the pupil.

The committee on public property inspects the same, making sure of their safe structure, and that egress according to size is sufficient in case of fire.

The board of health condemns school-houses improperly ventilated, or otherwise in an unsanitary condition.

For so long a time have separate forms been provided, that we no longer call it a modern improvement, although *that*, perhaps, was the first great step toward a healthier condition for the children.

No longer could they so easily come in contact, or inhale each other's breaths.

Every city and town has its laws in regard to the so-called contagious diseases,—variola, scarlatina, diphtheria, etc.,—but, as if ignorant of the yet more dreaded contagious tuberculosis and syphilis—more dreaded because, in some cases, entailing a life of suffering, if not extending to more than one generation—no protection or attempt at protection has been made.

On the other hand, with an eye single to the idea of education, separating it entirely from the necessity of a healthy body, a system of supplies—books, slates, pencils, clay, and the various kindergarten outfit, has been adopted by many cities and towns, whilst a dozen or more States have legislated to the same effect.

Very few of our public schools could boast that not a child attended capable of conveying disease to another, whilst many receive pupils loathsome to sight and smell.

Should the parents of carefully raised children but visit the schools, and see the filthy and unwholesome condition of many who use the supplies in common with the cleanly, they would shrink with horror from what their children become accustomed to.

An educator, of many years' experience, gave me as his opinion, that fully fifty per cent. of the children, in cities, attending school were too filthy to be allowed admission, and yet your children inhale the air of the school-room made foul by such pupils.

Cases of typhoid fever in children have been traced to this source of poisonous infection.

The child who, at home, has his individual toilet outfit, an hour later, in school, is handling what filthy, diseased hands have often handled. The child who *must* have a clean glass to drink from at home, eagerly uses the common cup, which often is metal, and when cleaned—who can tell!

Greater attention has been given to the *prevention* of small-pox than to any other disease, and yet it holds a comparatively low rank amongst diseases in its deadly influence.

Vaccination is *compulsory*, but there, all compulsion ends. To be sure, we have laws forbidding the school to children living in a house where there is illness from contagious diseases, but the experience of New England, during the past six months, has proven how powerless are such laws in controlling the epidemic of scarlatina. Many cases have been of so light a character as to be unrecognized, and no physician was called, until some members of the family developed a more serious form of the malady; the children of such families, in the meantime, attended school, using the books, slates, pencils, clay, and other materials which, later on, will be given to other children.

Knowing the ease with which the scarlatina germ is carried from place to place, and its great vitality—lasting for months if not years—is it reasonable to expect that this disease will not again and again develop from those very germs? True it is, that schools have been closed, all books, etc., burned, and the houses thoroughly disinfected when the enemy has become recognized as *sufficiently* epidemic in a given school.

The other exanthemata are likewise spread in our public schools, but being considered so little harmful to child-life and health, the common rule of protection is sufficient.

Diphtheria is another disease recognized as fatally harmful, and therefore to be guarded against; and yet not until a case is reported to the authorities is any step considered necessary to protect the children.

The text-books in our public schools, furnished the pupils, are in use from four to six years. These may be used one year at a time by the older, but much less time by the younger pupils, whilst in certain grades the readers are taken up daily or oftener and passed indiscriminately.

Hence, where greatest protection is needed, least is afforded.

It is in young life that the lymphatic system is most active; that the tissues are softest and most susceptible to infection.

How do children use books?

They bury their faces in them; the child with festering eyes to-day, your child to-morrow; the child with syphilitic discharges from the nose to-day, your child to-morrow.

They pillow their heads in them; the child with corruption pouring from its ears to-day, your child to-morrow; the child with hair matted with filth to-day, your child to-morrow.

They cough into them the catarrhal secretion preceding diphtheria; it may be, they sneeze into them, they breathe into them.

Can a child, with any abrasion upon its hands, come in contact with syphilitic, cancerous, or tuberculous discharges and be exempt any more than a surgeon? And yet many a child, with corruption breeding on its hands, uses the same clay to-day that your's will use next week. Cold water poured through the clay is the cleansing process. When dried and ready for use again, who can tell what is in it?

The disease above all to be most dreaded and guarded against, the disease which may be and often is hereditary, is probably the least recognized by teacher or pupil.

Although hereditary syphilis often ends in early life before the child attends school, yet it is a fact that for years it may again and again make its appearance.

How can this disease be guarded against?

Every child must furnish a certificate of vaccination. Why not, in case of eruptions, a certificate declaring contagion or non-contagion?

Cannot the public mind be made to understand the importance of

preserving and promoting health? A few careful, thoughtful parents purchase new books, etc., and substitute for those publicly supplied. They also provide their children with drinking-cups. Were the danger lurking in these sources appreciated, more would do so.

Massachusetts, in 1882, took the lead amongst States in providing school supplies.

She has ever proved herself a leader in good works. One step *farther* in this direction will crown the deed as good.

Let her supply each pupil, or at most each family, with books, etc., unused by others.

But what shall be done to prevent contagion from other sources?

Every home provided for destitute children that deserves the name has those suffering from specific disease isolated, or else the other children guarded from contact.

Why should children in our public schools have less careful attention?

Is it necessary that disease should be disseminated with education?

Is it considered democratic to allow every child the freedom of filth and contagion, whether to keep it or impart it, as a part of his inalienable rights?

However much it might at first savor of class distinction to have baths and clean clothing provided for those who need them, would it not be an elevating influence? Would not the children learn a self-respect, in their clean school apparel, that would lead them to wish and do their part for better home surroundings?

If cleanliness is next to godliness, where and how can the truth be better taught?

Some will cry out against inspectors, baths and clean apparel.

They will have such sympathy for the injured feelings of the unfortunate class.

Have such visited the homes from which these children come? I will not describe them. Every city has its slums.

We are here witnessing the great progress the world is making in science, art, industry, medicine and surgery. Is it not an appropriate time to arouse the public mind to a still more important matter?

So thoroughly has it been demonstrated that an educated mind can excel the uncultivated, that unconsciously, as it were, the foun-

dation of all education, cultivation and refinement has been made to take a secondary place.

It has almost been lost sight of that a healthy body is indispensable to a sound mind.

Of all progressive movements, what will compare with the preservation and improvement of our children's health?

What of so great importance as shutting the gates that shall sap the health of not only the rising generation but of generations yet unborn?

Teach the children hygiene in a broader sense. Call diseases by their names. Teach your children to loathe and shun those who are accursed, and no longer consider your child tenderly reared because kept in ignorance of unpleasant, painful, disgusting *facts*.

It has been my purpose to speak but a word for child life; to give but a glimpse at the dark cloud hovering about school days.

Let us, as physicians, sound the note of alarm until the school world is awakened to the real though subtle danger.

Discussion.

George B. Peck, M.D.: It has been my privilege to serve as member of a school board toward fifteen years, and to graduate from the public schools, but I have never seen a counterpart of the scene portrayed by the essayist. So far as my native city is concerned, and of that only can I speak definitely, the picture is entirely overdrawn. Children loathsome to sight and smell are not found in the public schools of Providence. Should they apply for admission they would promptly be directed to return home and wash. Where that educator lives who finds 50 per cent. of the pupils too filthy to be allowed admission I cannot conceive. It probably is outside the United States; certainly is beyond the limits of New England.

The dangers of modelling in clay are obviated in my schools by excusing children with sore or cracked hands from the exercise. Those of syphilis by sending those with noticeable symptoms to myself or to the superintendent of health for examination. Those of tuberculosis are practically *nil*. Children do not get books as described. If typhoid fever has been proven to result from the inhalation of air befouled by the breaths of dirty children, alas for the stability of bacteriology and the germ theory.

The essayist declares that "where the greatest protection is needed the least is afforded." That statement I deny. I never have seen any statistics that afford the slightest foundation for the popular idea that children are more susceptible to certain disorders than adults, though I have searched long and widely. I should like to find a

single iota of evidence that the seclusion of a child from scarlatina germs until ten, or even fifteen years of age, will diminish in the least his liability to contract the disorder upon the first exposure. On the contrary, I believe that the children of the common people, those who cannot attend school beyond the age of fourteen years at the farthest, are cruelly robbed of a very considerable portion of their educational opportunities by unnecessarily rigid sanitary regulations. In the average family of four, unless it should chance that all are sick simultaneously or during vacation, each one is unjustly and to a great degree needlessly deprived of at least one-seventh of its school advantages, crippling to that extent its ability to fight life's battle, darkening to that extent its life's prospects. That is a point never considered by rabid sanitarians.

SOME NOTES UPON HEADACHE IN CHILDREN.

By Gerard Smith, M.R.C.S., London, England.

The President of the British Homœopathic Society has asked me to provide some material for discussion, at your Congress, connected with the branch of work in which I happen to be specially interested—that of children's disorders. I have rashly acceded to his request, and have now to ask your kind indulgence for a very mediocre and "half-cooked" paper on a point of detail. The time at my disposal is short, and I am very hard worked in my professional duties. This will, perhaps, plead for me.

The Homœopathic treatment of headache in children is my subject. I think that the therapeutic treatment of headache, either in adults or children, is a point where Homœopathy has most signally triumphed over Old-School treatment. In treating adults for headache, we have an instance of the great value of purely subjective symptoms, and at the same time we are obliged to run the risk of being led astray by our patient's account of those subjective symptoms. I suppose that the patient who can accurately describe and locate his headache, with all its attendant effects, is even more rare than the man who, in proving a drug, can give a true account of the head sensations produced.

This latter rarity brings about another difficulty, for we have such a glut of head symptoms under almost every proved drug that to select a remedy becomes an appalling task.

I have been inquiring into the therapeutics of Allopathy in headaches recently, and my Allopathic friends tell me that besides the mere narcotics, which they agree with me can only smother the symptoms, they have a few *new* drugs, which are what they call *specifics* in some forms of headache. They have been lighted on "quite empirically," but I note that very pretty pathological theories have subsequently been produced to fit the facts of the success attending the use of these drugs. It will interest us as Homœopaths to learn from our friends something *new*. The drugs are:

Aconite, Belladonna, Gelsemium, Phosphorus, and Nitro-glycerine.

In dealing with children, we have not the difficulty of the patient's inability to be exact in recounting the symptoms, or to accept our suggestions as to the nature of the pain if they be only sufficiently expressive of great sufferings; but we have the still greater difficulty that our little patient gives us no verbal and personal description at all of his feelings. Where the child is old enough to give us a hint, we find the description generally more truthful than the average sick adult, less exaggerated, and often very picturesque, as in one case I have in mind, where a little girl said her head had "eyes worked with a lead weight, like dolly," and this weight was out of gear, and scraped inside her forehead.

But, as a rule, we are forced to depend chiefly upon objective symptoms with children, and I submit that this fact accounts for our comparative non-success in the therapeutics of headache in children. We are tempted to build too much upon pathological theories, a fault which is not common in Homœopathy, for, on the whole, it is probable that we neglect pathological condsiderations too much in our therapeutics.

I will not attempt a classification of headaches in children; such would be only arbitrary and artificial; but there are some general points which experience has led me to think of value. I have formed an opinion, perhaps on too slight reasons, that frontal headaches in children are more generally the result of some distant affection, or of a constitutional or blood disorder; whilst occipital headaches are often local, and more often than not they are ocular, or the result of injuries. Hereditary headaches seem to tend to one circumscribed spot, generally unilateral, and supra-orbital or temporal.

One of the most common grounds of error in therapeutics, in these affections (speaking for myself), is that of founding treatment upon the supposition that the pain is due either to cerebral hyperæmia or the reverse condition, anæmia. We often meet with children who have headaches accompanied with flushed face, bright eyes, and restlessness, who are usually anæmic; and my experience tells me that these children are not successfully treated with Belladonna or Aconite. More frequently remedies which are homœopathic to their usual constitutional state, such as Ferrum or Arsenicum, will prove valuable.

In anæmic children, with apparently hyperæmic headaches, it will usually be found that hot, nourishing food, such as hot milk or soup, will relieve the pain, whereas in true hyperæmic headache such a course would perhaps increase the pain.

I think that the examination of the urine will prove valuable in most cases of headache in children. Many anæmic children will be found to pass excess of phosphates or urates during their headaches, and we may draw valuable indications for diet from such facts.

I had a very painful case of persistent headache in a child under my care, in which great quantities of phosphates were passed whilst the urine was copious. The child was depressed and stupefied; had severe pain over the region of the kidneys; vomited his food, and his face was flushed, with photophobia; he had vertigo, so that he staggered. Many remedies were tried unsuccessfully, but the rather unusual one, Helonias, proved curative given in the sixth potency.

Another case I have notes of is, perhaps, instructive. A child, 9 years of age, a boy, who had epistaxis with his headaches; but this symptom could not be taken as an indication of cerebral hyperæmia, for the child was pale and markedly anæmic; he was mentally depressed; the headache was in the vertex; he had palpitation of the heart, and auscultation revealed a mitral insufficiency. Lachesis 12 proved the remedy. I mention this case as an example of the error of taking symptoms which often point to cerebral hyperæmia as always indicating that state in children. I venture to say that we too often look upon epistaxis as a proof of abnormal fulness of the cerebral vessels. In children we can usually afford to neglect the possibility of the bleeding being due to disease of the coats of the vessels, as it may be in adults; but we should be on our guard, and remember that epistaxis in children may be a sign even of constitutional anæmia or of a passive congestion due to valvular disease of the heart.

What are called "school headaches," bring great responsibility upon us; we are called upon to advise as to the nature and extent of the education which some children can bear, and if we decide wrongly we may do much harm to the children in their future life. There is a grave responsibility attaching to any man who causes a child to be withdrawn from its lessons, and to miss that period of life when habits of thought and memory may be most easily required;

and, on the other hand, great errors have been made in the opposite direction; school-headaches have been neglected, and the child's brain powers undermined by suffering, and its normally happy child-time rendered very miserable. My experience is, that under the modern system of education, which recognizes the facts of evolution in these matters, and leads a child up by gradual steps from play to "play-work," and so on to exercise of memory and perception by slight and easy stages, we see less of genuine school-headaches; by which I mean, headaches which are actually the result of overstrain of brain-powers, and yet, children at school do very often suffer from headache; after errors of "cramming" have been eliminated, and all the hygienic surroundings of children at school have been reformed to the modern scientific standard, we yet have too many of these cases to deal with. Our children—of course I mean English children only—are very glad at times to get out of school before the regulation hours, and if they choose malingering as the means to this end, they are clever enough to select maladies which are diagnosed by subjective symptoms only, for obvious reasons; and this kind of school-headache is the first to claim our attention.

I would not be so discourteous as to suggest that the American child ever shams; but there are English children in your schools; and if these should be frequently away from school, with headache, it is sometimes found that it is a headache which comes on very early in school-hours; is vague in its situation, and the youngster is able to read books of amusing stories, or engage in other occupations requiring considerable concentration both of eye and memory, without a return or increase of the headache; I have found that isolation from the class in which the child is placed at school, and the use of special large type, not interrupting the usual school-hours of work, is worth trying as treatment here; children will not hold out for long if they are malingering when thus kept apart from their fellows.

But the fact that children know that there is such a thing as headache from reading print, shows that this is no uncommon form of the affection; and I think that a large proportion of school headaches are due to eye-strain.

Headaches due to eye-strain are, I have noticed, more often occipital than frontal or vertex; considerable success in their treatment is gained by simple attention to the general health; but so-called

"tonic treatment" is never more than palliative; the headache may be kept away so long as artificial stimulation is kept up, but will return when it is removed; when the child is in exceptionally good health, the headache may be absent, as after the holidays; but as the school term progresses, the trouble returns; in such cases it will generally be found that the vision is apparently normal, unless the child is, at the moment of examination, suffering from pain; but when tired, or when under the influence of Atropine in the eye, the refraction will be found at fault; the child is able, under ordinary conditions, to produce accommodation by an effort which is unconscious, but in excess of what should be demanded of the child; and, under ill-health or prolonged application, this strain is evidenced by headache.

I have seen one case, that of a girl of 12 years of age, who suffered from severe neuralgic pain in the neck, radiating down the cervical nerves on both sides, which was caused entirely by eye-strain, and was cured by the use of the proper glasses.

I have no doubt that the Homœopathic therapeutics of such conditions are well known to all present, but they will be of little avail if the help of properly-adjusted glasses is neglected; not "Pince-nez," which sometimes provoke fresh headache in a sensitive child by their pressure on the bridge of the nose, but light-framed spectacles. There are three drugs which I have been led to use, of which the first, Acid picric., is perhaps not sufficiently valued; the pathogenesy of this drug points to both the headache and the ocular symptoms; I have used it in the higher potencies, by which I mean from 12 to 30; Nitrate of silver and Cimicifuga are the other two; these I mention as being, possibly, outside the general run of headache remedies, and because they have served me well. I use the two latter in varying doses, but the Cimicifuga in lower potencies, 3x, or thereabouts.

I think that the headaches of girls at approaching puberty are becoming more general in our times; the new physical régime has not been universally adopted as yet, though in families where it has been practiced from childhood, I find less suffering among the girls as menstruation comes on; the cause of a girl's headache at this period of her life is generally well recognized by mothers, who are awake to the necessity of physiological rest at these times; I need not detain you with therapeutics here, but drop a word to attract your

attention to the tendency of Homœopathic mothers having a fancy for Pulsatilla in all these troubles of their girls; it seems very apt to act upon the ovaries rather too freely, for the tendency in most girls is to rather free loss of blood at the first few periods, more often than the opposite (in my own experience), and Pulsatilla increases this tendency unduly; Coffea and Ferrum seem often useful.

The "genital headaches" of boys at puberty often cause much suffering, and in all cases of intractable headache in boys the possibility of approaching puberty should receive attention. Other genital irritations in boys also seem to play a prominent part in causing headache, and in my own experience I have found that phymosis is not seldom a cause of headache in boys, as it is of many nervous symptoms; and you, no doubt, will all remember cases where circumcision has cured such troubles. I have known, in several cases, the most happy results from circumcision in boys' headaches.

I will not deal with the headache of febrile states, since our attention in such cases is turned to the fever rather than the headache alone; but there are headaches accompanied by fever, and due to malaria, which are instances of the headache being the main guiding symptom. I think they are usually intermittent; they are either very vague and general in the locality they affect, or occasionally will be truly neuralgic, the pain being fixed in one or other of the cranial nerves, or at least being felt over the surface where the nerves are distributed, and perhaps the supra-orbital is the most common situation. I think that when a malarial headache, intermittent, and chiefly felt in the supra-orbital region, comes before us, we have the true sphere for Quinine to be used Homœopathically.

I may, perhaps, be at variance with others when I state that I do not think that true "migraine" is often seen in children. In the case of the children of parents who are sufferers from migraine we certainly often see headaches, but I find them usually to be coincident with some digestive upset, and the vomiting, if present, to be more often controlled by remedies acting upon the stomach than by such as are chosen upon the cerebral supposition. I recognize that these pathological suppositions are alien to the Homœopathy held by many, but I think that in most cases it will be found that a remedy, chosen first on the ground of the totality of the symptoms, turns out, on further examination, to be also the pathological similar.

Still, there are cases of headache in children in which, before the onset of pain, we hear of various warning symptoms, such as flashes of light before the eyes, or sensations of dimness of sight, or, in some cases, temporary weakness or paralysis of an arm or leg, either motor or sensory, or both. Then the pain in the head, localized generally in a definite spot on one side of the forehead, comes on, and is followed by vomiting. Such headaches, if frequent in onset, are probably true migraine, not coincident with dyspeptic trouble, and they may be hereditary. The first point is to eliminate the possibility of eye strain, for this is more frequently the cause of migraine than is sometimes supposed. In such cases of true migraine in children, Coffea 6 and Acid carbolic 12 have served me well.

I need scarcely mention the importance of headache where the pain is felt near the mastoid bones or round the ear, as indicating ear disease, but I have seen the neglect of timely surgical interference very injurious in at least three such cases. The pain is not headache, though generally described as such.

And we must always be on our guard when we meet with serious nervous symptoms, such as spasm of the muscles of the neck or spine, paralysis of muscles, twitchings or convulsions, in connection with children's headaches. Such indications of possible cerebral mischief, tubercle or tumor, are, of course, known to us all.

Finally, I would note the headache of renal disorder. I would urge regular testing of the urine in all cases of children's headaches, for if, as is sometimes the case, the pain is coincident with uræmia or albuminuria, our remedies will be of no use unless these symptoms are placed in the front rank when drawing up the total symptoms.

Ladies and gentlemen, I ask your kind indulgence for this hurried, incomplete, and very unscientific contribution. If you have any discussion upon this matter of practical detail, you will find material in the mere demolishing of my observations.

Discussion.

Phœbe J. B. Waite, M.D.: The last paper read was especially interesting because I believe so many children suffer from headaches when they ought to be made comfortable and cured, and the one thing above all others which gives suffering to children I believe to be eye-strain. As soon as they are put in schools they commence to droop. If the child is myopic, there is a request that he be put

in the front of the room, but no thought is given to the hyperopic child. I believe the uses of the ophthalmoscope are going to prolong the lives of children in bringing out this infirmity. Many children suffer from headaches, but we have our Pulsatilla and kindred drugs to help them. If your child suffers with headache, don't forget to take it to the oculist. This would be a beautiful specialty for a woman.

Dr. Duffield: There are many cases of nearsightedness which can be cured simply by having the patient accustom himself to distant objects. Take them out in the country, and in this way we get the muscles stretched, which is as good as nerve-stretching in other cases. I have cured cases of nearsightedness by having the patient go to live in the country, and so accommodate the eye to long distances.

A physician in the audience: I remember a case coming under my care several years ago of a girl having epilepsy, and she had a spasm once in about eight days. I found, on inquiry, she used sugar excessively, and when she left off sugar the spasms ceased in two or three months. There is a great deal in diet. Another cause of headache is want of ventilation in the schoolroom. Most of our schoolrooms are very poorly ventilated. There ought to be a radical change in this matter. We ought to turn our attention to hygienic methods more than we do.

ALBUMINURIA IN CHILDREN.

By Henry C. Aldrich, M.D., Minneapolis, Minn.

Madame President and fellow-practitioners: My line of thought for some time past has been turned rather persistently in the direction of albuminuria. At the present time medical opinion appears to me to be in somewhat of a transition stage in regard to the pathology of diseases of the genito-urinary organs. A good many ancient (and Allopathic) fallacies have been exposed and dropped, and we, the Homœopathists, are building up newer views upon surer foundations. The process will be slow (it is hardly more than begun), for the problems to be solved are so very numerous. I have endeavored to look at the subject of my paper in the light of present knowledge only, and not to go one step beyond what that state of knowledge would seem to justify. I have kept rigidly before my mind, too, the fact that childhood only, at the present time, is my sphere and, as a consequence, I can only touch upon such points in the general pathology of albuminuria as are within the limits of this restriction. Albuminuria, we know, may be produced in children from a variety of causes; the rarest causation, however, is, I think, due to pressure on the renal veins; but let the causative agent be what it may, I believe albuminuria should always be viewed with gravity. If I might occupy a few moments of time with a hasty review of the physiology of the kidneys, I should be glad, as I think it will freshen our memories and assist us in the discussion of this subject—a subject I am most anxious to have discussed both here and now; for I am assured that a finer opportunity for eliciting important truths from a conflict of fine minds will never arise.

Physiology of the Kidneys: Gaze with a retrospective eye, if you please, and we find that the membranous covering of the internal surface of the secretory cells of the kidney is really a true protective organ, keeping from the protoplasm of the cells any substances likely

to interfere with their functions. We remember, too, that this membrane varies in its structure, and the variation is due to the degree of functional activity of the epithelium.

In conditions of repose this membrane is homogeneous; in conditions of activity it is peculiarly marked, having a quantity of clear streaks running through it, and taking on the appearance of a structure formed of small straight rods, these being held together or separated by an intermediate substance of a clear fluid character. After some great functional excitation a remarkable change takes place; the collected urine detaches and pushes away this membrane from the protoplasm.

The products of the renal secretion collect within the epithelial cells in the form of liquid masses, having either a rounded or elongated appearance, and clear, like the contents of the tubules. This fluid percolates through openings in the limiting membrane, sometimes breaking through the latter to gain the interior of the canaliculi, often detaching and carrying it away.

A great advance has been made in our study of ætiology, proven by the fact of our knowing that a micro-organismal factor exerts its most prominent pathological influences upon the kidneys.

Within the past year or two some notable contributions have been made to the literature of this disease, notably, that of Clifford Mitchell, whose able exposition of the relation of urinary analysis to diet is of untold value; of Mannaberg, upon the relation of acute nephritis and the streptococci found in endocarditis. In eleven cases of acute nephritis, Mannaberg found the urine to contain streptococci, which disappeared from the excretion with the disappearance of the symptoms of disease. In patients affected by other maladies, and in healthy individuals, this micro-organism is not to be found, although searched for in a long series of urines. Mannaberg has cultivated this streptococcus in question and separated it, by peculiarities in its cultivation, from other varieties of streptococci. These do not appear to select the kidneys as an especial position for growth; they probably multiply in the blood and tissues generally; and in their escape through the renal structures, produce their serious consequences. This, undoubtedly, is a form of blood-poisoning specially involving the kidneys. As I before said, a great many old fallacies have been dropped; the trend of thought and study to-day is carrying us still further and further from the old lines of thought; views formerly

held are either passing into desuetude or becoming very much restricted; causes of disease, formerly hardly conjectured, are being added to the list, and some factors of causation, such as exposure to dampness, cold, etc., are dropped out.

I might occupy your time by citing almost numberless cases, published both abroad and at home by adherents of both schools, where there is no apparent causation of renal disease from exposure to dampness or cold. I will merely cite from Letzerich. He observed a number of cases of renal inflammation, due to a characteristic bacillus, from cultures of which he could reproduce nephritis in rabbits. The symptoms he found in general similar to those in other cases of nephritis, somewhat mild in form, but showing a predominance of gastric phenomena.

He found the spleen apt to be swollen, with considerable fever, and often rapidly developing œdema and effusion into the serous cavities. The urine contained short, straight or curved rods, in large numbers. These symptoms, finding no history of exposure to dampness or cold, make the suggestion of a micro-organism exceedingly relevant, especially so, when taking into consideration the manner of onset, the involvement of the lungs, and the prostration accompanying the affection. The affection in question was found most commonly in children, and in cases which came to post-mortem section, it was found that the bacilli developed only in the interstitial structure of the kidney; the spores were, however, found generally throughout the body. At no previous time has the question of the infectious nature of the renal affection, known as Bright's disease, been so forcibly placed before the profession; and there can be no doubt whatever as to the prominence which will hereafter be accorded to infectious influences in the production of the malady. An exceedingly interesting and instructive paper, published by Agnes Bluhm, upon the ætiology of Bright's disease, is based upon an analysis of 8442 cases, material derived from clinics during a period of five or six years; and the vast majority of these cases were clearly traced to an infectious origin.

We find to-day a good many men in our own school, besides numbers of outsiders, who still pin their faith to a belief in the constant existence of albumin in normal urine. After having made a great number of carefully conducted examinations of normal urine, I feel compelled to place myself in opposition to these. The result of my

experiments have proven most satisfactorily to my own mind that the presence of albumin is not characteristic of normal urine. There are some of us who argue, that small amounts occurring in normal urine tentatively is of no significance; that it is only where it reaches any proportion that it should be seriously considered. I believe that the smallest possible amount should be viewed with gravity, and that under any circumstances whatever, albuminuria means some fault of the epithelial covering of the glomerules. Probably Purdy's experience along these lines has been as large as any one man's. He, in a publication of his upon examinations of urine for life-insurance, takes this position: "No applicant for life-insurance should be debarred on account of albuminuria, but the time has arrived for stamping out the idea so prevalent among the profession, that the slighter traces of albumin in the urine are of no significance. It has been my experience during the past five years to make a large number of analyses of urine, from cases of all sorts, but never once have I met with a single case of albuminuria in which a microscopical examination did not discover some pathological condition of the kidney or uropoietic system sufficient to account for the symptom. Single examinations have not always returned me the foregoing result, but repeated searching has never failed to disclose pathological evidence, so I have arrived at this conclusion: there is positively no such thing as a physiological albuminuria."

Physiological albuminuria, however, is a term which has found so much favor with the profession generally, that whatever the belief may be, it—the term—will, in all probability, remain in vogue. I believe that albuminuria is many times the product of an incomplete or pernicious digestion. The incomplete transformation of the albumin leads to the production of a relative albuminuria, and from this, by very evident steps, to a true albuminuria. So, too, the various toxic substances, from a perverted digestion, are brought to the kidneys, in their excretion producing a like train of events.

I think, when we are testing for albumin, we should select the specimen of urine voided at the time when the patient is most fatigued; the amount of albumin, as we know, is greatly influenced by circumstances. Then should begin an exhaustive examination for casts, and if one fail to find them when they are actually present, the result must be a serious error in diagnosis.

Since I have insisted upon the entire collection of urine voided

within the twenty-four hours, my experiments have proved much more satisfactory to myself and beneficial to my patients. When searching for albumin, I have the child exercise as vigorously as is prudent before voiding urine for examination, and where the case is doubtful, I examine the urine of each micturition during the entire twenty-four hours. I need hardly say that the commonest cause of albuminuria is Bright's disease, but I do consider it my duty to say that I believe a large proportion of the so-called "physiological or functional albuminurias" eventuate in this malady unless treated before being allowed to endure for any length of time.

We are to-day familiar with the fact that nephritis is a disease common to childhood, arising most frequently after scarlatina or other blood poison. Formerly it was considered as one of the results of cold, dampness and drinking habits—its especial province the adult.

The average of disease in childhood is acute, so the prognosis for nephritis as regards complete recovery is mostly good. As a mere matter of enumeration we are perfectly familiar with the symptoms of acute Bright's disease—the pallor, the vomiting, convulsions, cough, dropsy, a pulse that intermits, oppressed breathing, scanty urine, with a large percentage of albumin; but individual cases are of most interest just now. Howard B., a boy aged ten, was placed under my care. His previous history was good, except for an attack of typhoid fever some nine months previous. The boy was hardly to be called sick (from the time of his recovery from the fever until placed under my care), at least for the greater part of the time. Ailing at times for two or three days together, causing great anxiety then, and again appearing to be, and insisting upon the fact of his being, perfectly well. There had been an occasional slight swelling of the lower limbs—a fact to which the mother attached no importance. When I first saw him he was in bed, and the swelling had been on the gradual increase. I found the lad in a condition of extensive anasarca, the action of the heart very irregular. The urine was only a few ounces in twenty-four hours; sp. gr. 1024; full of albumin and containing granular and hyaline casts. The boy during all this time, a period of nine months of treatment, insisted that he was well. The sp. gr. of the urine rose as high as 1030, and for a period of eight months the albumin averaged throughout from a third to a sixth. From that time on it decreased

from one-fifth to one-twenty-fifth, and during the last five or six days it disappeared entirely. I began treatment by restricting his diet—much to the boy's chagrin—keeping him to milk and water, jelly, bread and butter, sweet potatoes and peptonized milk toast. Digitalis and, later on, Ferrum continually, brought the boy around. Since that time he has remained well.

A somewhat interesting case of incontinence of the urine came under my care recently—the patient a girl six years of age. The previous history, according to the mother's statement, was one of perfect health. Application was made for admission to the public schools. The child could not gain admission until vaccinated. From that time on she was ailing, the entire body breaking out in sores. There was a discharge from the right ear, and back of the ear a superficial abscess. The urine at the time was dark, contained coloring-matter and was loaded with albumin. The child was suffering at the same time from prolapsus uteri, with leucorrhœa. I need hardly speak here of the two avenues for physical examination. There is but one way to treat such cases as the foregoing: by means of combined rectal and abdominal palpation. In the case of the child just mentioned the belly walls were both fat and relaxed, and there seemed a great possibility of considerable resistance being offered. It was important that the examination should be thorough, therefore I anæsthetized at once. Indeed, I think it advisable in all such cases; the effects are rapid, the duration short and the resistance slight. The rectal touch is the most certain way of approaching tubes and ovaries to be questioned, and combined with palpation by the other hand on the abdomen, is greatly enhanced in value. Rectal and bimanual massage proved very effective in restoring the pelvic organs to their normal tone. This accomplished, the albumin, which heretofore had appeared with the greatest regularity, disappeared. No casts were discoverable; so the altered condition of the urine I considered as due to the altered conditions of pressure in the pelvic and renal circulations. The muscular tone of the patient was influenced considerably by daily applications of electricity. China proved very useful here. I had a favorable and uninterrupted action of the single prescription and minimum dose of the single indicated remedy. This Hahnemannic trio, I rejoice to say, speaks for itself without any trumpeting.

We have been accused by the Old-School men of "Never having

discovered a single bacillus." Shall we ever rally from the thrust or dare to look a brother Allopath in the face again after being told such a thing as this? And yet who is specially benefited by knowing that a certain comma bacillus is found in this or a rod-shaped one in another? We have a law, that a particular medicine produces a definite result, and *that one thing* we have proven to be of more practical use than the natural history of all diseases combined could ever be.

In cases of incontinence of the urine treatment must be given with an eye to the cause, the principal causes being the various *motor neuroses.* A large number of such cases are exceedingly troublesome; when, however, there is irritability of the bladder, I believe Belladonna will prove your friend in almost every instance. In such cases I believe we cannot lay too much stress upon massage of the bladder per rectum. It has given me most excellent results, together with a daily salt-water bath, accompanied by a brisk rubbing in the region of the spine; there must, too, in such cases, be a careful consideration given to hygiene and diet, and last, but by no means least, attend to the psychical surroundings.

This may, on first thought, appear overstrained and far-fetched; I make it a strong point simply because I have watched the effects on a nervous child of a nurse thoroughly uncongenial. I have seen the same kind of thing obtain in the hospital, where children were away from home, everything strange and new. It must be unnecessary for me to say that "powerful emotions" bring an increase of albumin in the urine. And, believe me, you will experience unexpected results frequently, if you turn your attention with vigor toward this one thing. I think, if I remember rightly, our own Dr. Clifford Mitchell lays considerable stress upon this; to my mind, it is something to be strongly considered, whatever the malady may be. I was asked, in preparing this paper, to show the prophylactic properties of Homœopathy in relation to my subject. I confess myself almost totally at a loss here. The causes of "Albuminuria in Children" are many, are unforeseen, and it appears to me quite impossible to treat of it prophylactically. In concluding this hastily written and very imperfect paper, I should like to say a few words to our confreres from abroad.

An Englishman, some time since, said, in a way that was quite characteristic of the national generosity and kindliness of spirit, "It

is to the American Homœopathists we owe it—to their indomitable independence, energy and pluck—that Homœopathy stands in the position it does to-day in the United States and before the world; aided by the free institutions of their country and the emancipated minds of the people, they have been able to achieve what we have scarcely attempted." The gentleman who wrote those words may be here to-day; if he is, I should esteem it a pleasure and privilege to meet him. That the onward sweep of Homœopathy in this, our own land, has been overwhelmingly irresistible is a fact far and away beyond dispute. We owe its success, in a large measure, to the attitude taken by the Homœopathic pioneers. If only you Englishmen would acquire or wrest the right to teach, and grant diplomas to your own students, headway would be made immediately. Why should you beg recognition from Allopathic colleges for a fact which the entire world at large accepts? If any one thing more than another would stand as proof of the progress of scientific medicine, it is the fact that the men of the Old School are rapidly incorporating into their materia medica our laws of cure; by giving medicines both palatable to the sense of taste and pleasant to the sense of sight, they are so thoroughly revolutionizing their style of practice that, except for the old empirical tendencies still clinging to them, we should almost fail in recognizing them. The time has arrived, I think, for sweeping some of these pirates from their medical high seats; it is being done rapidly here. In the name of these assembled Homœopathists, let me beg of you to gird up your loins, buckle on your armor, and fight the good fight, doing for Homœopathy in England what we have done for it in America—place it to the fore.

THE TREATMENT OF MENINGOCELE, ENCEPHALOCELE AND HYDRENCEPHALOCELE, BY MEANS OF A COLLODION CAP.

By J. Martine Kershaw, M.D., St. Louis.

It has been my misfortune to meet with several cases of meningocele, encephalocele, and hydrencephalocele. Most of them died in the course of a few weeks or months; convulsions preceding death. Of the three forms of tumor, hydrencephalocele may be considered the most unfavorable. These tumors consist of brain substance, the meninges, and fluid. Encephalocele consists of cerebral substance only, while a meningocele contains the membranes of the brain. These protrusions have been mistaken for polypi, abscesses, vascular growths, and cephalæmatoma. These tumors have been treated by injection of iodine; "Mr. Annandale ligatured the mass in one instance, and effected a cure." Bandages have been employed, muslin caps lined with cotton, and gutta-percha caps filled with wadding, all of these get out of place easily; they have to be reapplied frequently, and besides, they do not afford the child's head any protection. From the moment these protrusions appear, they are constantly in the way, and as constantly being bruised or injured in some way. If the child is lifted up, or laid down, the diseased part is almost certain to receive injury, and thus retard any disposition towards recovery.

After some very disappointing experience, I adopted the following treatment: Immediately, on the discovery of a case of cerebral protrusion, I paint the protruding part with collodion; I order the nurse to do this three times a day. The collodion is carried entirely over the tumor, and down upon the scalp one-half an inch below the lower line of the protrusion. In twenty-four hours the hardened collodion has made a light, strong, cartilaginous-like cap, which fits loosely, yet perfectly, the protruding cerebral substance. From the moment it is applied the child is protected from all ordinary chances

of head injury. Its head can be washed, its hair brushed, and it can be laid upon its pillow with but little chance of injuring the diseased parts. If the tumor protrudes much, it raises the plate, and yet is still covered by it. At the expiration of a week or so, I only paint the upper half of the plate and scalp, leaving the lower half free to permit of spraying or syringing with carbolized water. This is done three times a day. I have prescribed Belladonna and Calcarea phosphorica, as indicated. I have just dismissed a case of this kind, the treatment of which was very satisfactory. The opening closed gradually, new matter being deposited, until at this date not a trace of disease can be seen, and the child is, to all appearances, mentally and physically well. Dr. S. B. Parsons saw this case with me, and at his suggestion I prescribed Calcarea phosphorica, and this, I believe, hastened the cure. I present this paper for your consideration, because the management of this class of cases is usually difficult and very unsatisfactory; while the formation of a protective cap with collodion is original with me, as far as I am able to learn in looking over the literature of this subject.

ALBUMINURIA IN CHILDREN.

By William W. Van Baun, M.D., Philadelphia, Pa.

Albuminuria in children is frequently overlooked, especially in private practice, in cases presenting none of the well-known characteristic symptoms usually accompanying the disease. The oversight depends upon a lack of frequent and systematic urinary examinations. It is now axiomatic that the younger the child the less dominant the "old time" symptoms. The indications often point to involvement of organs remote from the kidney centre; for instance, a simple high fever may be present, or vomiting, purging, and collapse, or drowsiness and mild convulsive seizure, or simply anæmia.

The common cause of albuminuria in children is Bright's disease as a sequela of the acute infectious diseases so frequent in childhood. Again, Bright's disease may exist without any apparent cause and practically without indicating symptoms in children even as young as six months or less. In these cases, when an urinary analysis is desired, the urine can be collected by keeping the child on pieces of well-boiled linen on a rubber pad for some hours. By this method sufficient urine can be wrung out to give the desired chemical and microscopic tests. A sterilized silk sponge can be used in the same way. If retention is present, a small catheter will secure the fluid. Pus, blood, or chyle are rare causes of albumin in the urine of children. Morbid growths resulting in pressure will also give rise to presence of albumin. The most interesting phase of the question of albuminuria in children is the so-called functional albuminuria. By this is meant a renal albuminuria with absence of casts and all characteristic signs of Bright's disease or any other disease, the victim being to all intent and purpose in perfect health. The claim has been made that this condition is more frequent in boys than in girls. In cases of adolescence this seems to be established. It frequently accompanies the habit of masturbation. The

amount of albumin present varies greatly; sometimes it is quite large. As a rule, it is limited, some in the morning, more at noon, and none at night; or, again, there may be none in the morning and quite marked at night; or, when the patient has been resting in bed, it may disappear altogether, remaining absent for some days after resuming the usual occupation of the day, and then from some apparently insufficient mental emotion or excitement a large quantity may reappear. The ingestion of food, or certain articles of food, like eggs, seem to cause it to return. Time and again the chemical urinary analyses show an entire absence of albumin in the morning urine, with a gradually increasing amount as the day advances, being highest in urine voided on retiring. For this condition no attributable cause can be determined, excepting the daily muscular activity of a child in contradistinction to the night's repose, which gives a morning urine free from albumin. If exhaustive microscopical examinations fail to give evidence of Bright's disease, such as tube-casts, renal epithelium, etc., then the cause of the albuminuria becomes speculative and unsatisfactory. To many authorities the diagnosis of functional albuminuria, or albuminuria of adolescence, is sufficient, while others fail to accept this comforting opinion and view with apprehension intermittent paroxysmal albuminuria, or the daily recurrence of a slight albuminuria as indicative of the existence of some unrecognized kidney lesion, or, at least, as the advance signal of the oncome of some form of Bright's disease. I hold with the latter, and view skeptically the existence of a physiological albuminuria. The diagnosis of these masked conditions is extremely interesting and vexatious. I recently came in contact with a case in a girl, aged 13, who had an attack of diphtheria, with secondary glandular involvement. She convalesced nicely. On the fourteenth day the temperature rose suddenly to 103° F., with albumin in a scanty urine, amounting to nearly one-half the amount of urine examined in test-tube. The temperature fell rapidly, the albumin diminishing in pace with the fall of temperature; the latter remaining stationary at 99°, and the urine containing a trace of albumin for four weeks, no tube-casts ever being present. The following six weeks the urine was tested as follows: A morning, noon, and night sample, separately, every other day and a twenty-four hour sample every second day with negative results. The menstrual function was then established, and albumin appeared regularly

for five days without casts. Then a period of six weeks passed without albumin, followed by a reappearance of albumin after a short period of nervous excitement, and so on. The question in this case arises: When was the albuminuria established? Was it the result of the diphtheria, or did it exist beforehand? In either event, there being no other symptoms but a high fever and a scanty urine at the time of the discovery of the albumin, the prognosis must be of the tentative or experimental type. The lesson to be drawn is the necessity of careful, exhaustive, and persistently-repeated examinations of the urine for casts, in order to establish a diagnosis and prognosis in the by no means infrequent cases of albuminuria in children without symptoms.

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